



## LITERATURE REVIEW ON KAYA KARPA MEDICINES FROM VARIOUS SIDDHA LITERATURES

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### ABSTRACT

Siddha system of medicine is one of the ancient practice of India emerged from the south and now flourishing globally. Since several centuries before siddhars like Agathiyar, Thirumoolar, Bogar, Karuvurar and others with their intellectual knowledge called siddhi have optimized the formulation and practice guideline for this traditional medicines. As per the statement of ancient siddhar thirumoolar in his vedic literature called Thirumandhiram states that “soundness in health reciprocates the wellness of the mind”. Kaya karpam is well optimized treatment of siddha technique that completely detoxify (anti-aging) the body by replenishing the cellular physiology and altering the immune competence. As per the present literature it was evident that kaya karpam medications works behind the principle of prevention and restoration. Karpam has potential to heal, rejuvenate and balance the vatham, pitham and kapham which make the body and mind to attain its stability. According to the literature karpam type medicine has been classified in to three categories viz mooligai karpam, seeva karpam (thathu) and yoga karpam. Most of the components on these medicines herbal, mineral and some with animal products has adjuvants. According to our present literature review the ailment for karpam medicine could be for prevention of ageing, stress, maintain wellness, immune enhancing, neurotonic as prophylactic on the other hand karpam also serves as curative medicine in treating infections. Principle of siddha system of medicine depicts that basic physiology and functionality of the humans depends on the balanced state of vatham, pitham and kapham. Present review strongly indicates that most of the karpam formulation prescribed for management of vatham, pitham and kapham related disease. Systematic preclinical and clinical validation has to be carried out in future relating the preferable mechanism by which each karpam act in reverting the physiology of the disease.

**KEY WORDS:** *Siddha system, Agathiyar, Thirumoolar, Bogar, Karuvurar, Kaya karpam, Prevention, Rejuveate, Curative, Vatham, Pitham, Kapham*

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## 1. Introduction

### 1.1. Concept of disease prevention

Disease prevention should focus on strategies that reduce the risk of disease, identify risk factors, or detect disease in its early, most treatable stages. The emphasis on the use of medicinal plants had hitherto been placed on the treatment rather than prevention of diseases. However, there exists in the literature considerable report in recent times on research work on the use of medicinal plants and their constituents in disease prevention. A world health organization (WHO) expert group defined traditional medicine as the sum total of all knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental, or social imbalance and relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or in writing [1].

### 1.2. Free radicals and oxidative stress

Free radicals are part of normal metabolites for many organisms, and a complex system of endogenous and exogenous antioxidant sources in the body are employed to mitigate the potential damage from free radicals [2]. When the body is in a state of aging or stress, these highly reactive chemical species are produced excessively, and structural abnormalities and dysfunction of the cell and mitochondrial membranes can arise [3]. Excessive free radicals affect animal performance, even resulting in the development of diseases [4]. Improving the antioxidant status of living animals is one of the primary methods for improving bird performance in the poultry production industry [5,6].

### 1.3. Oxidative stress induced Diseases

A role of oxidative stress has been postulated in many conditions, including atherosclerosis, inflammatory condition, certain cancers, and the process of aging. Oxidative stress is now thought to make a significant contribution to all inflammatory diseases (arthritis, vasculitis, glomerulonephritis, lupus erythematosus, adult respiratory diseases syndrome), ischemic diseases (heart diseases, stroke, intestinal ischemia), hemochromatosis, acquired immunodeficiency syndrome, emphysema, organ transplantation, gastric ulcers, hypertension and preeclampsia, neurological disorder (Alzheimer's disease, Parkinson's disease, muscular dystrophy),

alcoholism, smoking-related diseases, and many others [7]. An excess of oxidative stress can lead to the oxidation of lipids and proteins, which is associated with changes in their structure and functions.

Consuming greater amount of antioxidant rich foods might help to protect against diseases which is suggested by various dietary research findings [8]. Antioxidants are substances that control or obstruct the oxidation of cellular oxidizable substrates. They employ their effect by scavenging reactive oxygen species (ROS), and blocking the generation of ROS [9]. ROS are free radicals involved in many human diseases. Superoxide anion radical ( $O_2^{\bullet-}$ ), the hydroxyl radical ( $OH^{\bullet}$ ) and hydrogen peroxide ( $H_2O_2$ ) are the most common kind of ROS [10]. In modern decades, focus on plant research has extended all over the globe. Gathered data exposed the immense potential of medicinal plants applied in various traditional systems, for their biological actions and antioxidant principles [11].

### 1.4. Crucial role of medicinal Herbs

Humans began using plants for medicinal purposes as early as middle Paleolithic age, approximately 60,000 years ago, and now the World Health Organization estimates that over 80% of the people in developing nations rely on traditional remedies such as herbs, for food and healing sickness [12,13]. The use of medicinal plants has been developed over a long period of time and now plays a critical role in favorable health outcomes. Today, a number of pharmaceuticals currently approved by the Food and Drug Administration (FDA) have originated from plants; natural products (and their derivatives and analogs) represent over 50% of all drugs in clinical use [14-15].

The therapeutic benefit of medicinal plants is usually contributed to their antioxidant properties [16-18]. Phenolic compounds possess diverse biological activities such as anti-inflammatory, anti-carcinogenic and anti-atherosclerotic activities. These activities might be related to their antioxidant activity [19]. Other studies showed that there were significant correlations between phenolic compounds and antioxidant properties of medicinal plants under investigations [20,21]

### 1.5. Aging and Cell Death

Most scientists now agree that aging is at least in part, the result of accumulating damage to the molecules such as proteins, lipids, nucleic acids(DNA&RNA) that make up our cells. If enough molecules are damaged, our cells will function less well our tissues and organs will begin to deteriorate and eventually, our health will decline. Our parts start to wear out and we gradually lose the ability to function. Millions of your cells are dying. In fact your health depends on the judicious use of a certain kind of cell death –apoptosis. An apoptosis is so carefully planned out that it is often called programmed cell death. During apoptosis, the cell shrinks and pulls away from its neighbors. There is another kind of cell death, called necrosis that is unplanned. During necrosis, the cells outer membrane loses its ability to control the flow of liquid into and out of the cell. The cell swells up and eventually bursts, releasing its contents into the surrounding tissues. A cleanup crew composed of immune cells. The cells cause the area to become inflamed and sensitive.

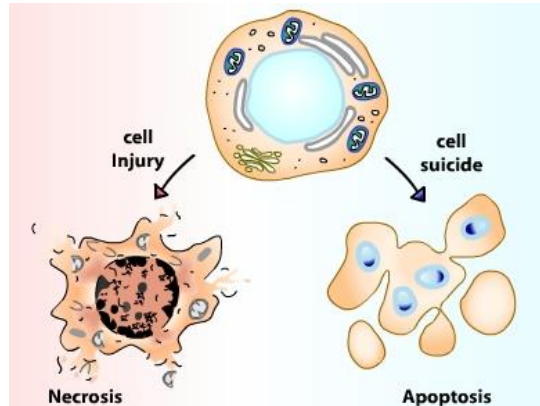


Figure 1: Differentiation between necrosis and apoptosis

### 1.6.Telomeres: Cellular Timekeepers

One of each end of its 46 chromosomes. Before a cell divides, it copies its chromosomes so that each daughter cell will get a complete set. But because of how the copying is done, the very ends of our long slender chromosomes don't get copied. Our chromosomes shorten with each cell division. Fortunately the regions of the ends of our chromosomes called telomeres- But once a cells telomeres shrink to a critical minimum size, the cell takes notice and stop dividing.

### 1.7. Rejuvenation

Aging leads to changes on an organismal but also cellular level. However, the exact mechanisms of cellular aging in mammals remain partly understood and the identity and functional role of aging factors, some of which have previously been defined in model organisms such as *saccharomyces cerevisiae* remain elusive. As we get older, many changes occur in our bodies and it is evident that aging affects the whole organism. Some changes are more visible, such as wrinkles and gray hair, others are more hidden for example elevated risk for chronic diseases, neurodegeneration.

Rejuvenation is a process that not only delays aging but actually reverts it, leading to a younger cell, tissue or body. Rejuvenation would erase age accumulated damage and aging hallmarks collected during ones life. Rejuvenation is occurring in every has man in the germ cells, thereby resetting the aging clock to zero in order to produce completely young and rejuvenated offspring.

### 2.Siddha system of medicine

Siddha system is one of the oldest systems of medicine in India. The term Siddha means “One who is accomplished” and siddhar’s were perfected masters who have achieved a high degree of physical as well as spiritual perfection or enlightenment. Eighteen Siddhars were said to have contributed towards the development of this system.

Siddhargal were the premier scientists of ancient day’s. Siddhars were spiritual adepts who possessed the ashtama siddhigal. Agasthiyar is believed to be the Father of Siddha medicine. Siddha system has enormous pharmacopoeia containing herbal, animal and metal-mineral products. Siddha medicine is claimed to prevent the disease, cures the disease, manage the disease and to maintain the ratio of tridhosagal.

### 2.1.Kaya karpam as preventive therapy

Kaya karpam (special combination of medicine and life style) and muppu (the universal salt) are specialty of Siddha system of medicine. Kaya karpam a special branch of this medical system is a science of rejuvenation, longevity, spiritual wellbeing concept of kaya karpam was briefly explained by saint thirumoolar in his text thirumathiram. The word kaya karpam denotes the meaning of prevention of body from diseases. Nowadays this can be correlated with

the antioxidant concept. It deals with the prevention of Narai (whitening of hairs), Thirai (shrinkening of skin), Moopu (aging), and Saakadu (death).



Figure 2: Ingredients and compounding of Kaya Karpam

Kayam means body karpam means stone also known as lifespan of brahma according to Hindu mythology. Hence, this medicine is one which makes human body as stone and not affected by any diseases or aging. Some medicinal preparations or single herbal prescribed by Siddhars for rejuvenation and for prolonged life. These are also known as “kaya karpam” treatment or the drugs called as “Ambrosial” medicines. This treatment invigorates the system presenting for death and decay of the body, thereby saving from decrepitude, death, hunger, thirst, fatigue and sleep etc. It secures for the user perpetual youth and mastery over the body and enables one to live for thousands of years on earth.

In our siddha system many literatures say about kaya karpam medicines. But nowadays it is not properly used & lack of brief knowledge about kaya karpam medicines. This project is to establish the collection of Siddha literature books for kaya karpam medicines and to improve our knowledge about kaya karpam medicines and their uses.

2.2. Classification of Kaya karpam

Adoption of preventive techniques to maintain one’s body health helps to retain youthfulness and attain spiritual perfection. “kaya karpam” (rejuvenation and longevity) was practiced as a preventive measure against illness. Practicing kaya karpam also provides acquired immunity (seyarkai vanmai) to our body. Kaya karpam acts prevention against disease and restoration of health during illness. Kaya karpam is studied under three categories viz.

1. Mooligai karpam
2. Thathu and seeva karpam

3. Yoga karpam

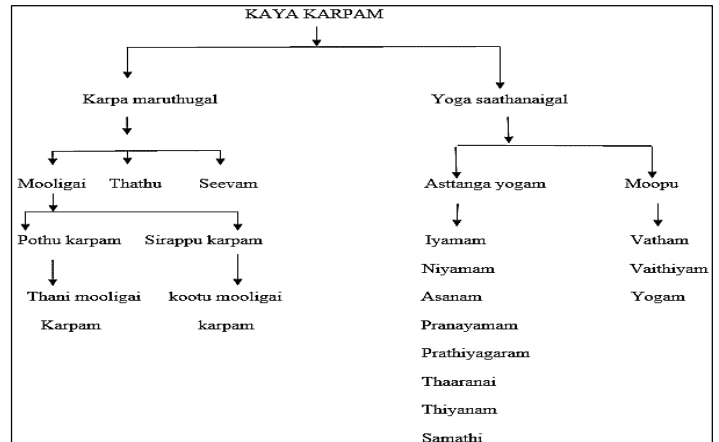


Figure 3: Fundamental classification of Karpam

2.3. Benefits of Kaya karpam

1. Delaying of natural phenomenon of ageing
2. Both physique and mind are strengthened
3. Prevention of Life style diseases including diabetes mellitus, hypertension etc
4. No side effects are present as these are safe drugs
5. Act as immune boosters - In brief kaya karpam nourishes the three – Mind, Body and Soul.

MOOLIGAI KARPAM	
Pothu karpam	Best tonic for the body
Sirappu karpam	All vatha diseases and kapha diseases
THATHU KARPAM	
Aya sambeera karpam	Paandu, sobai etc.
Aya bringaraja karpam	Geriatric problems, paandu
Poorna chandrodayam	Sterility, impotency, consolidation of sperms
JEEVA KARPAM	
Cow’s milk	Increase muscle power, gives shine to body, cures nervine diseases.
Goat’s liver	Increase muscle power, gives shine to body, cures nervine diseases.

BOHAR 7000 MUTHALAVATHU KADAM [22,23]	
Vijayan Kadukkai Karpam	All vatha diseases
Pirithivi kadukai karpam	It purifies body and naadi
Sivanthi kadukai karpam	Piles
Abayan kadukai karpam	Nervine tonic

Sengkaranthai karpamum vethaium	It prevents death.
Oorilai thamarai karpam	Urinary tract diseases, jaundice, dryness due to pitham.
Seenthil karpam	Gastric ulcer, sannai, hiccup, tuberculosis, venereal diseases, burning micturation
Karuvembu karpam	Increases the blood count and prevents pallor of this skin.
Sivanar vembu karpam	Vatha , pitha, kapha diseases, it stenthens the body constituents
Vellai Vishu Karanthi Karapm	Prevents death
Brahmi karpam	It prevents the presbiopia, it increases the sex hormones in the body.
Anda karpam	Prevents premature ejaculation

<b>BOHAR 7000 AALAAM KAANDAM [24]</b>	
Bohar siru karpam	Karpam gives happiness
Kaya kalpa choornam	It makes the body looks like piller
Maha kayakarpa chenthooram	Prevents death.
<b>BOHAR 7000 EZHAAM KAANDAM</b>	
Aamai karpam	Extends the longevity of life.
Vilaangu karpam	Prevents male infertility by increasing spermatogenesis.
<b>BOGA MUNIVAR 7000 KU SUTHIRAM 700 [25,26]</b>	
Milagu karpa choornam	It cures the vatha, pitha, kapha diseases, “naadii” ellam irukikkollum.
Karisalai karpam vembin choornam	It purifies the blood.
Seenthil karpam	Venereal diseases, it reduces the body heat, tuberculosis, it streghtends the body constituents, it prevents death.
Anda karpam	Makes the body shine & glow , it strengthens hands & legs, tightens the “NAADI”.

<b>AGASTHIYAR POOJA VITHI-200 THEECHAA VITHI -200 [27,28]</b>	
Vallarai milagu karpam	Cures gonorrhea, painful urination.
Karanthai seenthil karpam	All types of pschychatric disorders
Panja mooligai karpam	Cures jaundice, anaemia, dropsy, pitha diseases
Vembu karpam	Vatha soolai, cough, and all types of kuttam
Thoothuvalai karpam	Cures 80 types of vatham, soolai
<b>THANVANTHIRI NIGANDU – 300 [29]</b>	
Amuri karpam	Valamaana vaasi
Menik karpam	Yakkaiku azhivae illai
<b>KORAKKAR MALAIVAGADAM [30,31]</b>	
Sivantha thumbai karpam	Kaaya siddhi”,it cures muyalagan valippu.
Karbogarisi karpam	Cures piles and fistula, tuberculosis
Mundaga viruchak karpam	It gives shine to the body like mirror
Soma viruchak karpam	Elephant strength to the body
Keeri viruchak karpam	Prevents snake venom to enter into the body due to any bite.
Guruvarik karpam	Kaaya siddhi
Irupaval sedi karpam	Thega siddhi
Orilai Thamarai Karpam	Kaaya siddhi
Boomi sarkarai kizhangu	Makes the body golden colour.
Aadu thinna paalai kodi karpam	Prevents venom to enter into the body
Seetha sengkzhuneer karpam	Tuber mixed with milk-“kaaya siddhi
Vennaval karpam	Kizhavanum kumaranaavan
Kanarpala virai karpam	Keeps the body young
Peichurai virai karpam	Prolongs longevity of life.
Avuri karpam	Yaanaai palam undaagum
Azhukanni karpam	Prevents premature graying of hairs ,wrinkling of skin
<b>AGASTHIYAR 12000</b>	
Pothigai Malai Kaya Karpam	Prolongs longevity of life, it makes the body like piller



### 3.DISCUSSION

Most of the siddha literatures are in the form of poems and specifically made available in tamil as a mean of evident of its emergence from TamilNadu. Divine power of siddhar like Anima, Mahima, Laghima, Garima majorly responsible for conversion of mass into energy. Some of the deserving siddha text are still in the palm leaves and guided principles are still in tamil language. Historically western scholars like max muller translated some of the traditional procedure in English which render beneficial for western researchers [32]. Dissemination of knowledge to the upcoming siddha physicians and researchers in the field is of utmost important as it mandate for transformation of ethics and guidelines in following siddha system of traditional medicines. Hence constant effort should be made to popularize the siddha system of medicine to compete with the global need. Present literature reviews aimed at elaborating the siddha literature's describing the significance of "Kaya Karpa Medicine" a unique specialized siddha methodology for rejuvenation and wellness in humans.

Oxidative stress may contribute to several dreadful diseases in this free radicals becomes innumerable part of normal metabolites for many organisms, and a complex system of endogenous and exogenous antioxidant sources in the body are employed to mitigate the potential damage from free radicals [33]. When the body is in a state of aging or stress, the highly reactive species (oxy, peroxy, hydroxyl, nitroxyl) generated excessively that causes structural abnormalities and dysfunction of the cell and mitochondrial membranes [34]. Excessive free radicals affect fundamental functionalities, even resulting in the development of some diseases like cancer, neurodegeneration, arthritis, cardiac dysfunction, inflammatory and metabolic disorders etc [35]. Improving the antioxidant status of living being animals is one of the primary methods for healing and prevention.

Antioxidants are a class of compounds that reduce free radicals and inhibit oxidation directly or indirectly. Oxidative stress in the body may be alleviated by exogenous supplementation with antioxidants. However, several synthetic antioxidants have shown potential adverse effects, such as liver injury and carcinogenesis, especially long-term

administration of synthetic antioxidants [36]. Thus, exploration of safe and natural antioxidants to resist oxidative stress has become a research hotspot in recent years. Antioxidants like quenches or deactivate free radicals, often before they attack targets in biological cells [37]. Recently interest in naturally occurring antioxidants has considerably increased for use in food, cosmetic and pharmaceutical products, because they possess versatile action in their multitude and magnitude of activity which provide enormous scope in correcting imbalance [38,39].

Selection of literature plays vital role in detailing the focus of research, extensively study on the following literature's like thanvanthiri nigandu, vaithiya guru nool, simittu rathiram reviews strongly suggest that category of rejuvenation while using karpam type of medicine falls on blood cell rejuvenation (karuvembu karpam, karisalai karpam vembin choornam), reproductive cell proliferation in male (vilaangu karpam, vilvapoo karpamum vethaium) and female, hormonal balancing (brahmi karpam ,moodru mooligai karpam ), prolong life span (vensaarai karpam, poorna karpam ,paasaana karpam, maail muttai karapm, kayakarpa aya chenthooram, amurtharasa karpam etc), general health (karugkarippan karpam ,karippan karpam ,peichurai virai karpam ,thozhukanni karpam).

According to our present literature review the ailment for karpam medicine could be for prevention of ageing, stress, maintain wellness, immune enhancing, neurotonic as prophylactic on the other hand karpam also serves as curative medicine in treating infections like tuberculosis (konji marak karpam ,thetra marak karpam ,naagathali sedi karpam ,karbogarisi karpam etc) , memory and respiratory disorders (vishnu karanthi karpam), urinary tract infections (oorilai thamarai karpam), jaundice (oorilai thamarai karpam ,panja mooligai karpam), gastric ulcer (seenthil karpam), muscular dysfunction (Jeeva karpam, amirthai kadukai karpam ,vilaangu karpam etc), psychiatric diseases (sencharai karapam), venereal disease (karpooravilva karpam ,karanthai seenthil karpam), inflammation. Some medicine also acts as anti-dote as snake anti- venom (aadu thinna paalai kodi karpam ,keeri viruchak karpam ,siriya nangai karpam), insect bites (vidather karpam ,vembu karpam) etc.

Principle of siddha system of medicine depicts that basic physiology and functionality of the humans depends on the balanced state of vatham, pitham and kapham. Present review strongly indicates that some preparation prescribed for kapha disease which includes arokani kadukai karpam, sivanar vembu karpam, karanthai seenthil karpam, poorna karpam, milagu karpa choornam, sivanar vembu karpam, thiriviruthai kadukai karpam, milaku karpam etc.

Vatham seems to be one of the prominent humor on the human body imbalance of vatham may leads to several dreadful disorders including some inflammatory diseases. Formulations like Sirappu karpam, vijayan kadukai karpam, thiriviruthai kadukai karpam, ganthaga karpam, koongin poo karpam, vembu karpam are known form ancient time in management of disease pertains to the vatham humor. Other class of karpam exclusively utilized for treating disease on misbalancing of pitham that includes sivanar vembu karpam, moodru mooligai karpam, panja mooligai karpam, porikaara karpam, karpooravilva karpam, oorilai thamarai karpam, thiriviruthai kadukai karpam. There are specialized formulations which were derived for treating general ailments like strengthening of human body amurtharasa karpam, thathu karpam, sirappu karpam, pothu karpam. Adjuvant ae additional therapeutic agents that boosting the action of medicines. The most prominent reason for usage of adjuvant is to enhance or synergize the action of the core active components present in the formulation. For example, usage of honey, palm jiggery, butter milk, cow milk, urine, ghee is best mode of delivering the drug without altering the functionality. Health promotion, disease prevention and chronic disease management are proactive approaches to health care that stresses prevention at different points along the health care continuum. Health promotion and disease prevention strategies focus on keeping people well and preventing diseases from occurring [40]. These strategies are referred to as primary prevention activities. Prevention is categorized into three levels first is primary prevention, which seeks to decrease the number of new cases of a disorder or illness. At this level of prevention, we have that is health promotion and specific protective measures. The second one is secondary prevention, which seeks

to lower the rate of established cases of a disorder or illness in the population (prevalence) [41]. This level essentially involves measures that ensure early diagnosis (such as screening) and prompt management. The third one is tertiary prevention, which seeks to decrease the amount of disability associated with an existing disorder. This level involves disability limitation and rehabilitation.

#### 4. CONCLUSION

Health care systems around the globe are experiencing increased levels of chronic illness, population aging and escalating health care costs. Patients and health care providers alike are demanding that health care services. Traditional medicine is often seen as more accessible, more affordable, and more acceptable to local populations and can therefore be a tool to help achieve universal health coverage. Siddha system of medicine served as an ailment for various disease emerges on mankind since several centuries before. It was observed from the present review that most of the literatures dealt karpam as a specialized medicine in treating infectious and degenerative disorders. It was evident that herbs, minerals, metals and animal products are considerably the major composites of the karpam type of formulations. This outcome may begin a new era on repurposing and utilization of these traditional karpam formulations for treating several diseases that are emerging due to change in the lifestyle and environmental hazards. Systematic preclinical and clinical validation has to be carried out in future relating the preferable mechanism by which each karpam act in reverting the physiology of the disease.

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