

DOI-10.53571/NJSR.2022.4.4.1-9

Aphrodisiac Action Of Traditional Siddha Formulation Kamarasi Karpam -A Review

Balagurusamy. K*Jeeva Gladys.R**Jothi.J***Kehren R. Rayma****

Principal*, Lecturer**, Professor***, B.S.M.SFourth year****

Corresponding Author Email:dr.k.balagurusamy@gmail.com

(Received:20 March2022/Revised:5 April 2022/Accepted:15April2022/Published:20April2022)

Abstract:

Traditional Siddha medicine is an age-old practice that originated in South India, particularly in Tamil Nadu. It is based on a blend of traditional medical treatments and spiritual disciplines. Research in traditional system focuses on 'Bedside to Bench' since there is a vast repository of time-tested formulations that have been successfully provided in clinical practice with few side effects when used as directed. Infertility is one of the 4448 ailments covered by the Siddha system treated in a step-by-step manner. Kaya karpam is regarded a "Ambrosial medication" utilized by Siddhars and was insisted upon by them to be followed in order to extend life expectancy and treat the lifestyle disorders. Kamarasi Karpam (KK) is one such formulation indicated for male infertility. Infertility affects about 15% of couples worldwide imposing a huge economic burden on the society towards its treatment through assisted reproductive techniques. A vast variety of plants are mentioned in the Siddha materia medica to treat infertility but there is a lack in scientific knowledge behind traditional claims. Hence, it was purposed to conduct a preliminary literature evaluation on one such Kaya Karpam formulation, Kamarasi Karpam (KK), with a focus on its aphrodisiac properties.

Key Word: Kaya karpam, *Tinospora cordifolia*, *Tribulus terrestris*, *Embllica officinalis*, Siddha, Aphrodisiac.

Introduction:

Siddhars are those who lived and maintained their bodies as they desired. They researched if they could get away of birth and death by making the body strong and flawless, allowing them to live for a long time together. They are the greatest men in the world, with enormous power via rejuvenation and spiritual achievement in their everlasting bodies. They sought "The Elixir of Life" also called *Karpam* with the use of medicines of extraordinary potencies and virtues, which

included all types of pharmaceuticals, minerals, metallic preparations and thus conquered all infirmities against grey hairs, wrinkled skin, old age, and death.[1]

Sexual dysfunction is a major medical and social condition affecting 10-52 percent of males and 25-63 percent of women. It's the inability to have normal sexual intercourse on a regular basis.[2] Male impotence is a serious issue that can lead to infertility. As people age, their sexual function naturally declines. It is more frequent among males in their forties and fifties. Sexual dysfunction can be caused by a variety of factors, including psychological disorders such as anxiety, depression, stress; Neurological disorders such as stroke, cerebral trauma, Alzheimer's disease, Parkinson's disease; Chronic disorders such as diabetes, hypertension; Lifestyle factors such as chronic alcohol abuse, cigarette smoking, ageing and a decrease in hormone levels with cardiovascular, hepatic, renal, pulmonary and cancer are examples of systemic diseases. [2]

Impotence (erectile dysfunction), pre-mature ejaculation, and male infertility have been the focus of research over the past two decades. There are a variety of prescription pharmaceuticals that can serve as a sexual stimulant, increasing sexual desire and activity. However, the use of medicines has not demonstrated to be effective in treating sexual issues, and there are several adverse effects such as arrhythmias, suicidal ideation, mental bewilderment and tremors.[2] According to a recent survey, 152 million men worldwide suffer with impotence to some degree. Furthermore, based on demographic estimates, the prevalence of the illness is expected to more than double in the next 25 years.[2] The history of impotence has shown us that this ailment was once thought to be of psychological or supernatural origin until only a few years ago. Today, the discovery of a variety of medicines has reduced societal stigma and given both the patient and the physician some control over how the disease is managed.

In humans, sexual function is a significant factor in determining quality of life and subjective well-being. Sexual issues are common and have a negative impact on one's mood, well-being, and interpersonal interactions. These difficulties are linked to male erectile dysfunction and sexual desire. Treatment for sexual dysfunction that is successful can enhance not just sexual relationships but also general quality of life. The rising prevalence of male sexual dysfunction necessitates a more intensive and quicker search for medications with aphrodisiac properties and few negative effects. Aphrodisiacs are drugs that are used to promote sexual activity and fertility.

In Siddha medicine, there are various aphrodisiacs that are used for a variety of purposes. [3]The present literature review is about the scientific analysis of KK which consists of the well-known Aphrodisiacs namely *Nerunjilvithai*, *Nellikai* and *Seendhil*. Scientific analysis of the ingredients of KK indicated in the classical Siddha literature 'KAYA KARPAM' written by D.S.JANAGAKUMARI, has been the core of this review in specific to its fundamental goal of procreation (reproduction).

Materials And Methods:

Preparation of KK-

KK a *Siddha Kaya karpam* medicine has been indicated in the text "KAYA KARPAM" and has the below ingredients tabulated in Table 1:

Table No 1. Ingredients of KK

| S.No | Ingredients | Botanical Name | Parts used | Quantity |
|------|----------------|-----------------------------------|------------|------------|
| 1. | Kamarasivithai | <i>Tribulusterrestris</i> Linn. | Seeds | 52.5 grams |
| 2. | Nellikai | <i>Emblicaofficinalis</i> Gaertn. | Fruit | 52.5 grams |
| 3. | Seendhil | <i>Tinosporacordifolia</i> Miers. | Bark | 52.5 grams |

Procedure: The above tabulated shade dried drugs (Nellikai fruit without seeds and Seendhil bark without skin) are to be taken in equal ratio $1\frac{1}{2}$ *palam* (52.5 grams each) and grinded. In order to obtain a fine powder, the mixture is to be filtered using a mesh cloth. This fine powder is to be stored in a container by adding cow's ghee $\frac{1}{2}$ *palam* (17.5 gram) and honey $\frac{3}{4}$ *palam* (26 grams).

Dosage: 6-8 grams can be taken morning and evening with milk.

Indication: Aphrodisiac, General tonic, Immunity, Prevention of debility.[4]

Ingredients of KK and their pharmacological action: [5]

| S.No | Ingredients | Family | Phytochemicals | Pharmacological action |
|------|----------------------------|----------------|--|--|
| 1. | <i>Tribulus terrestris</i> | Zygophyllaceae | Protodioscin, Harmine, Ferulic acid, Terrestrosin –D | Antirolithic Diuretic Aphrodisiac Antitumor Anticancer Immunomodulatory Hypolipidemic Antidiabetic Cardiotonic Antihypertensive |

| | | | | |
|----|----------------------------|----------------|---|--|
| | | | | Hepatoprotective Analgesic Anti-inflammatory Anthelmintic Antispasmodic Antimicrobial and larvicidal effects. Anti-angiogenic Hematinic Nutritive Anti-depressant |
| 2. | <i>Emblica officinalis</i> | Euphorbiaceae | Ellagic acid, Chebulinic acid, Apigenin, Gallic acid, Quercetin, Chebulagic acid, Isostrictinin, Corilagin, Methyl gallate, Luteolins and Tannins like Emblicanin A, emblicanin B, phyllaemblicin B, punigluconin and pedunculagin. | Anti-inflammatory Antimicrobial Cytoprotective Anti-oxidant Anticancerous and Immunomodulatory properties. Anti-angiogenic Hematinic Nutritive Anti-depressant Aphrodisiac |
| 3. | <i>Tinosporacordifolia</i> | Menispermaceae | Berberine, Palmitine, Octosanol, Columbin, Hecpidin, Glutathione. | Immunomodulatory Anti-diabetic Anti-oxidant Anti-inflammatory Anti-pyretic Antispasmodic Hepato-protective Memory-boosting properties. Anti-angiogenic Hematinic Nutritive Anti-depressant Anticancer Aphrodisiac |

Aphrodisiac action of the ingredients:

1. *Tribulus terrestris* (TT):

Hypogonadism is characterised with diminished sexual desire and activity due to physiologically low amounts of androgen. The relaxation of corpus cavernous smooth muscle is caused by a variety of neurotransmitters and their inter/intracellular communication. Androgens have a role in the control of penile erection by influencing these neurotransmitters. Protodioscin (PTN), the active component in TT, enhances libido and spermatogenesis in humans and animals, as well as increasing testosterone, leutinizing hormone, and dehydroepiandrosterone levels (DHEA). Protodioscin's hormonal actions are thought to be mediated by its metabolic conversion to dehydroepiandrosterone. DHEA is a significant circulating steroid in human plasma, generated

primarily by the adrenal glands and to a lesser extent by the gonads; it serves as a precursor for both androgens and oestrogens. In humans, TT containing PTN has been proven to boost DHEA levels. DHEA is a neurosteroid that works as a central gamma amino butyric acid antagonist to help with sexual function. The observed aphrodisiac effect might be due to an increase in DHEA and its subsequent conversion to testosterone and its metabolites. As a result, TT may still be useful in the treatment of mild to moderate erectile dysfunction. [6]

TT has the potential to be employed as a safe therapeutic alternative to existing techniques for the treatment of male sexual dysfunction based on its efficacy in curing aging-induced sexual dysfunction in experimental rats. Testosterone levels and sperm count stay higher even in the face of high circulating testosterone levels in all elderly and sexually slow experimental animals' starting hormonal condition. A possible explanation for the lack of feedback inhibition would be TT's ability to release leutinizing hormones.[7]

2. *Emblica officinalis* (EO)

Erectile dysfunction (ED) is a predictor of more serious cardiovascular and psychoactive diseases, as well as an indicator of underlying vasculopathy. Oxidative stress, or the excessive generation of reactive oxygen species (ROS), particularly superoxide (O_2^-) and hydrogen peroxide (H_2O_2), is a common pathogenic denominator in both Cardiovascular disease and ED. Thus there is a direct link between oxidative stress, sexual impotency, and psychotropic processes, all of which drastically modify nitrogen oxide inhibition mechanisms. As a result, it's important to assess the ability of natural herbs/extracts to treat diseases and impairments that present as ED. Fruit of EO might be considered as a potential plant source of antioxidants as it exhibited stronger antioxidant activities compared to those of the commercial compounds (quercetin and BHA). Its fruit possesses an aphrodisiac potential based on different studies. [8]

3. *Tinospora cordifolia* (TC)

Frank Beach presented two separate physiological pathways responsible for sexual behaviour manifestation in the early 1950s. According to this theory, one of these systems is in charge of sexual arousal while the other is in charge of sexual performance. For the neuroscience of sexual behaviour, this notion has proved crucial. On wistar albino rats, oral treatment of various dosages of TC efficiently facilitates numerous aspects of copulatory activity. It increased the expression

of male sexual behaviour in sexually active rats and increased sexual desire in sexually inactive male rats. Preliminary phytochemical research and aphrodisiac activities were performed on the plant extracts. Saponins, carbohydrates, glycosides, and mucilages were found in the findings of phytochemical research. As a result, TC is a safe medicine with no known side effects that can help improve male sexual activity and cure a variety of sexual diseases such as erectile dysfunction, premature ejaculation, lack of sexual desire, and ejaculatory incompetence.[9]

Mechanism involved in Aphrodisiac potentials:

On sexual stimulation visual (or) otherwise the farnines of the axons of parasympathetic nerves release nitric oxide (NO) gas. The gas diffuses into smooth muscle cells that line those arteries of the corpus cavernosum (spongy erectile tissue) and activates the enzyme guanylate cyclase (GC). The later converts the nucleotide guanosine triphosphate (GTP) into cyclic guanosine monophosphate (cGMP). The cGMP in turn causes the smooth muscle cells around the penis to relax, leading to dilation and increased flux of blood into the penile tissue. This blood is essentially trapped in the penis and results in an erection. The erection ceases after a while because cGMP is hydrolyzed by phosphodiesterase type-5 enzyme (PDE-5) into inactive GMP. (The PDE-5 enzyme resides in the penile tissues). Aphrodisiac potentials inhibit the hydrolyzing action of PDE-5 with the result that active cGMP can accumulate 'Undisturbed' and prolong the erection through increased blood flow.[2]

Figure -1. Fundamental Theory of Siddha:

Our body is made up of seven constituents. The seven bodily elements, according to Siddha physiology, serve as basic building blocks for human health. Generally medicines with Aphrodisiac action are also considered to be an Immune booster as the development of the seven constituents plays a vital role in immunity. According to the above figure-1, energy is given to the body by the interweaving of food and digestive juices on the first day. On the second day, it combines with blood. On the third, fourth, fifth, and sixth days, it gradually merges with muscle cells, fatty tissues, bones, and bone marrow, until eventually fusing with Semen/Ovum on the seventh day. As a result, on the eighth day, it provides the body with the necessary solidity.

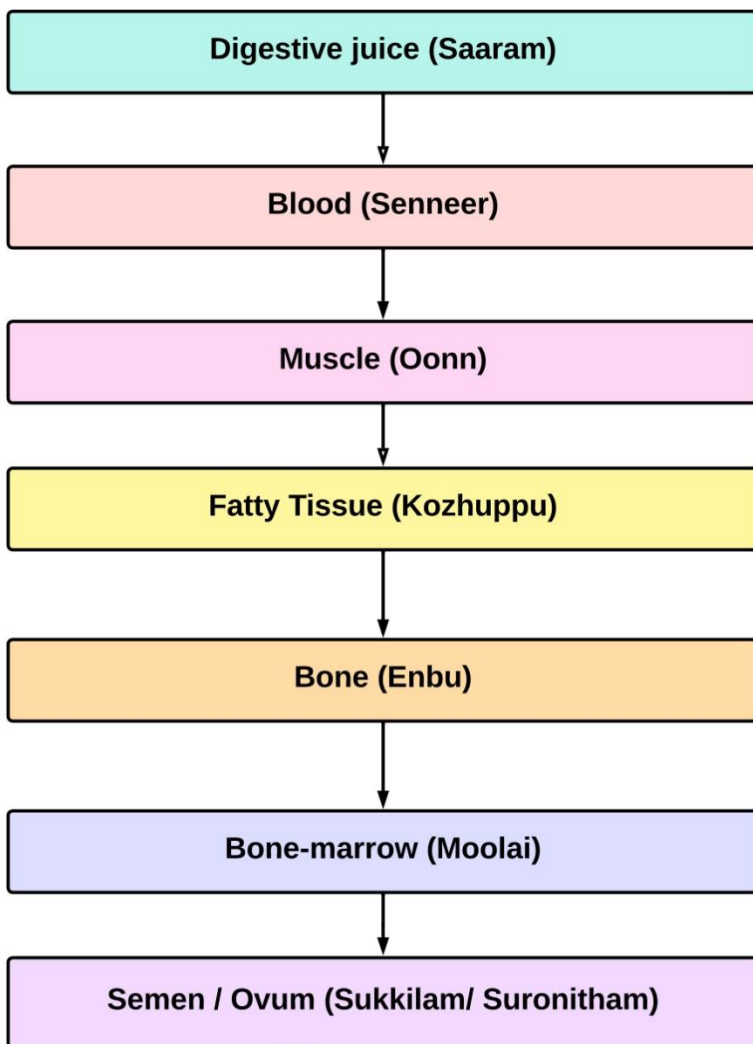


Table No 2. Action of *KamarasiKarpam* on Tri-Humours

| S. No | Ingredients | <i>Suvai (Taste)</i> | <i>Veeryam(Potency)</i> | <i>Vibagam (Metabolite)</i> |
|-------|--|-------------------------|-------------------------|-----------------------------|
| 1. | <i>Tribulus terrestris</i> (<i>Nerunjil</i>) | Astringent, Sweet | <i>Seedham</i> | Sweet |
| 2. | <i>Emblica officinalis</i> (<i>Nelli</i>) | Sour, Astringent, Sweet | <i>Seedham</i> | Sweet |
| 3. | <i>Tinospora cordifolia</i> (<i>Seendhil</i>) | Bitter | <i>Veppam</i> | Pungent |

Taking other drugs into consideration, increased *Vatham* is quietened by drugs having coolant and unctuous property (Ex: ghee); *Pitham* by *Seedhaveeryam* (Ex: milk); *Kabam* by dry and

Veppa-veeryam drugs (Ex: honey) thus treating the Tri-humour imbalance as shown in Table-2.[5]

The "continuation of offspring" and the survival of the human race are the most basic and fundamental purposes of sexuality. Before dying, an organism must replicate itself in order to continue to exist. The word aphrodisiac comes from Aphrodite, the Greek goddess of sexuality, love, and beauty. An aphrodisiac is a substance that has aphrodisiac properties (food or drug) that elicits arousal of sexual desire. Man has strived to improve his sexual abilities since the dawn of time. When man didn't know about metals and could only utilize stones, he demonstrated his sexual prowess through ceremonial dances and hunts. The hunt for food, sex, and self-preservation propelled this early man. Throughout recorded history, the prospect of bioactive aphrodisiacs derived from plants, animals, or minerals has piqued interest. Diabetes, hypertension, antipsychotic, and antidepressant treatment medications all have a detrimental effect on erectile dysfunction. Hypogonadism, hyperprolactinemia, and neurological diseases are all organic causes of ED. Several natural aphrodisiac potentials are used to treat ED. [2]

The failure to perform this task effectively is a major problem in the reproductive process. This is referred to as sexual dysfunction. Aphrodisiacs can be used to treat this condition, which occurs in a number of forms. Karpam formulation is prescribed for management of such Vatham, Pitham, Kabam related diseases. Rejuvenating herbs investigate Kayakarpam's diversity and generate Nutraceuticals. Karpam medicine, as noted in the Siddha literature review, may be used to avoid ageing and stress, as well as to maintain wellbeing, immune enhancement, and neurotonic purposes.

Conclusion

Karpam, is a preventive and a curative medication that may be used to cure a variety of diseases. Kamarasikarpam has been indicated in Siddha text for Aphrodisiac, body strengthening and acts as prophylactic medicine for disease prevention. Because TC, TT, and EO each have aphrodisiac actions, when the entire medicine is taken as Kaya Karpam for 40 days, a progressive improvement in spermatogenesis and hormonal balance can be achieved which has been scientifically evaluated in this preliminary work. Further preclinical and clinical studies may be warranted to substantiate the traditional claims of this antique formulation.

References:

1. Uthamarayan“ Thotra Grama Araychiyum Siddha Maruthuvavaralarum”
2. Ramandeep Singh “An Overview on Traditional Medicinal Plants as Aphrodisiac Agent”
Journal of Pharmacognosy and Phytochemistry | Journal of Pharmacognosy and
Phytochemistry| Volume 1 Issue 4| IC Journal No: 8192
3. Vahitha Bi, S. M. *Aphrodisiac Activity of Venthamarai Magarantha Chooranam
(Nelumbo Nucifera, Gatern) and Broncho Dilator and Anti-Histaminic Activity of
“MarichiyathiMathirai”*. Diss. Government Siddha Medical College, Chennai, 2012.
4. D.S.Janagakumari| “Kaya Karpam”
5. Kehren R. Rayma et al “A REVIEW ON IMMUNE BOOSTING EFFECTS AND
PHARMACOLOGICAL ACTION OF KAMARASI KARPAM” IOSR Journal of Dental
and Medical Sciences (IOSR-JDMS) e-ISSN: 2279-0853, p-ISSN: 2279-0861. Volume
20, Issue 11 Ser.6 (November. 2021), PP 43-56
6. K. Gauthaman et al. “Aphrodisiac properties of Tribulus Terrestris extract (Protodioscin)
in normal and castrated rats” | Life Sciences | 71 (2002) 1385–1396
7. Burger M, Sikka SC, Bivalacqua TJ, Lamb DJ, Hellstrom WJ. The effect of sildenafil on
human sperm motion and function from normal and infertile men. *Int J Impot
Res.* 2000;12:229–34.
8. Raghunath T. Mahajan and Swapnali M. Gajare., “Manifestation of erectile dysfunction
with adaptogenic antioxidant aphrodisiac plants” | Int J Pharm Biomed Res 2012, 3(1),
52-68
9. Wani et al. / Phytochemical Screening and Aphrodisiac Property of *Tinospora cordifolia* |
IJPCR April-June, 2011, Vol 3, Issue 2 (21-26)