



Review Article

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SIDDHA SCIENCE IN MALE INFERTILITY: A REVIEW

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ABSTRACT

Siddha system of Medicine [SSM] is practiced generally in and around the areas of its foundation in Tamilnadu, a southern state of India. According to Siddha science, saaram (chyle), senneer (blood), oon (muscle), kozhupu (cholesterol), enbu (bone), moolai (bone marrow), sukkilam/suronitham (semen/ovum) are udal thathukkal (physical constituents) which are identical to the various types of tissues. SSM defines disease as the signs and symptoms resulting from the vitiation of intrinsic factors i.e three humors and seven physical constituents due to changes in extrinsic factors such as diet and activities. According to Siddha saint Yugi muni, symptoms like semen showing lack of sweetness, floating on water, absence of vitality & frothy micturition indicates Aan maladu [male infertility]. Male infertility is evaluated through investigation of semen and hormone analysis (testosterone, follicle stimulating hormone and luteinizing hormone). In this article the authors state about the siddha science in male infertility.

Keywords: Siddha, Aan maladu, Male infertility, Semen, Udal thathukkal

INTRODUCTION

Siddha system of Medicine [SSM] was started on from Tamil Nadu, a southern state of India. Practiced generally in and around the areas of its foundation. SSM describes the human body is made of five primordial basic elements like space, air, fire, water and earth, which are the building blocks of physical and subtle bodies. The physiological function of the human system is mediated by uyir thathukkal (functional constitution of the body) i) vatham - air (bio energy-movement) ii) pitham-bile (bio energy-fire) iii) Iyyam-phlegm (bio energy-water) which is formed by the combination of the five primordial basic elements. According to Siddha science, Saaram (chyle), senneer (blood), oon (muscle), kozhupu (cholesterol), enbu (bone), moolai (bone marrow), sukkilam/suronitham (semen/ovum) are udal thathukkal (physical constituents) which are identical to the various types of tissues¹. Siddha scientific principles, has been

already present in the universe. The Lord God formed the man of dust [earth element] from the ground and breathed into his nostrils the breath of life [air-vatham] and man became a living creature². According to Siddha medical science the element earth gives fine shape to the body, including bones, tissues, muscles, skin and hair. SSM defines disease as the signs and symptoms resulting from the vitiation of intrinsic factors i.e three humors and seven physical constituents due to changes in extrinsic factors such as diet and activities. Drugs of SSM are used separately or in combination for maintaining the three humors. Male infertility is evaluated through investigation of semen and hormonal analysis (testosterone, follicle stimulating hormone and luteinizing hormone)³. According to Siddha saint Yugi muni symptoms like semen showing lack of sweetness, floating on water, absence of vitality & frothy micturition indicates Aan maladu [male infertility]. In this article the authors discuss about the siddha science in male infertility⁴.

DEFINITION

Table 1: Siddha Definitions⁵

Maladu (Infertility)	A disease by which men/woman are rendered incapable of producing a child by reason of defective semen or menses in them is termed as Maladu
Aan maladu (Male Infertility)	Want of fertility or fecundation in a man's semen
Sukilam (Semen)	Semen is formed by the essential parts of bone marrow the sixth constituent of the body mixed with blood. It is the support of the body and the root of pregnancy.
Vinthu (Sperm/Masculine embodiment)	A term to denote the male reproductive cell /gamete/ characters

ETYMOLOGY FOR SUKILAM

Derived from Tamil word, Sukilathuvam - venmai; Sukilam - venmai (white/purity)⁶

ANATOMICAL [ANGADHI PADHAM] AND PHYSIOLOGICAL [SUKARANAM] TERMS

Table 2: Anatomical and Physiological terms in Siddha^{5,7}

Bijam, Lingam, Andam, Vithai (Seed)	This has the capacity to give rise to new offspring
Vinthu (sperm)	Sukila kirumi (spermatozoa); Sukilathathu - vinthu; Sukilam - vinthu
Sukila vasayam	Repository [Testes and ovaries] for reproductive tissue
Manomaya kosam (Mental system / psychic system)	Constituted by the mind and the five organs of perception
Niyana inthiriyam	Action of genital organ
Mulatharam (Neuro endocrine centres)	Located between the rectal and external genitalia [in the perineum] at the base of the spinal column. Resting place of serpent power / rectal plexus
Swathittanam (Neuro endocrine centres)	It is situated two finger breadths above the moolatharam. It is a constituent of earth element
Thi mantalam (Fire Zone)	This is found two finger breadths above the moolatharam
Thinkal manadalam (Lunar zone)	Lies in the centre of the eyebrows from where emerges brightness like that of millions of moons and stars
Kuntalini	A form of energy located in the moolatharam
Abana vayu	Component of vatham-downward air
Theka ilakkanam (Bio Type)	The nature of an individual, including structural, functional characteristics, adaptability, a relatively stable and genetically predetermined which is classified into four main types namely Vali/ Azhal/Iyyam/ Thontham

SYNONYMS FOR OLIGOZOOSPERMIA

- Thathu Rogam (Vinthu vai patria noi): Disease relating to sperm
- Thathu kuraivu / Thathu pushti kuraivu: Oligospermia
- Vinthu kuraivu: Oligospermia
- Vinthu anu kuraivu: Oligospermia
- Sheena vinthu: Oligospermia^{5,8,9}

Other related terms

- Sukila nattam: spermatorrhoea
- Vinthu nashtam: spermatorrhoea⁵

EPIDEMIOLOGY

Elavenil [Early summer] aggravates the disease¹⁰

SIDDHA PHILOSOPHY AND PHYSIOLOGY FOR SPERM

Fertility Period (Ovulation Days)

As per saint Agathiyar, on the first day of woman's menstrual cycle, her genital blooms like a lotus having fourteen to sixteen petals. From the first day onwards, till the fourteenth or sixteenth day, each petal closes one by one each day. Within these days if the vindhu [sperm] which is chiefly constituted by the fire and air elements, enters within the natham [ovum], then all the petals will immediately close. Thus, if a man and woman copulate within the first fourteen or sixteen days of the menstrual period, it is easy for the formation of the zygote to evolve and stay in the uterus¹¹.

Acrosomal Reaction of Sperm and Embryogenesis in Siddha

"Natha vinthu vilungum vayu" For gestation, for the union of the male and female fluid, vayu (pranan) is needed. The simile of mixing together of thaneer (water) and sunnabu (calcium) is mentioned to explain the fusion of the ovum and sperm to develop into an embryo. This can be explained through the following research work done in the sea urchin. The increase in intracellular Ca (calcium) will cause water to enter the cell, and will increase the hydrostatic pressure. This will support the extension of acrosomal reaction (calcium dependent reaction) of the sperm.

Then the acrosome fuses with egg's plasma membrane (beneath the vitelline layer). The sperm head will now have the access to the cytoplasm. Sperm alone are not required for activation of the egg and the calcium can induce egg activation^{5,12,13}.

Elemental Composition and Three Humor in Human Embryology

The natham (ovum) consists of the element earth, whereas the vinthu (sperm) consists of fire and air. The uterine wall which nourishes it has water element and the uterine cavity is of the element space. Therefore, in the formation of fetus all the five elements combine and create. As per saint Dhanvantari, when the sperm and ovum combine on the very day, three kinds of humors spring forth¹¹.

Microscopic Nature of Sperm

Vinthu and natham are parama anu. Saint Yugi says, munai arugu nuni **pani pol** suronethathil sernthu thakavey. The sperm and the ovum are very microscopic the invisible base of aggregate bodies, they are like a dew on the sharp tip of a grass which means the semen and ovum merges and that the sperms in the semen moves in utmost swiftness and joins¹².

Morphology of Sperm

As per saint Thirumoolar, the semen containing innumerable spermatozoa passes very swiftly (motility) into the uterus with the rapid vibration of their tail. It is understood that the sperm has tail¹¹.

Sperm Motility

From the poems, vayu odu vinthu **senru** malarkul sernthal; pinumam sukilathil piranavayuu than **selum** and vinthu angey **oorum** pothu, it is explained that with the help of vayu (kinetic force- pranan) sperm move into the uterus and fuse with ovum¹².

Functional Sperm

As per saint Yugi, "Vinthu thayin karbathil vegu thanthiramaga selum, **Oru pani thuli alavey nilaithu nirkum**. These lines denote that only one functional sperm is necessary for fertilization¹².

Preventing polyspermy

From the poem, Vayu odu vinthu senru malarkul sernthal, **malar ethel-yelam moodi kolum** and Veli pol **valinthu kakum** vinthu udan prana vayu, it is explained that abana stays outside and the pranana goes along with the spermatozoa and bisects the size of the zygote. Just as the fence guards the garden, the air surrounds the thiranda suronitham (zygote) and guards it and prevents other sperms entering it (preventing polyspermy). Although many sperms attach to the coats surrounding the egg, it is important that only one sperm fuses with the egg plasma membrane and delivers its nucleus into the egg¹².

Aperture

Saint Yugi says, munai arugu nuni pani pol suronethathil serunthu thakavey and vaithya saaram says, paintha veli thamar pol. The spermatozoa enter the wall of the ovum by penetrating it and where the sperm enters into the ovum is perforated with apertures¹².

Sex Determination

As per Athuva Thathuvam, the fusion of the sukkilam and suronitham constitutes the human body. The variations can lead to deformities. Depends upon the dominance of sukkilam or suronitham the male or female birth take place. At the time of copulation if the male dominates then it is male child and if the female dominates, then it is a female child. If the male and female are equal, then the child will be neutral gender or a eunuch. Here male indicates the vindhu and the female indicates nadham^{11,12}.

Formation of the Semen/Sperm

- i) Formed from Saaram
- ii) Formed from Moolai
- iii) Formed out of the Water element

Formed from Saaram (Chyle)

According to saint Theraiyar the concentrate of the food becomes, saaram (chyle) the same day; senner (blood) the second day; oon (muscle) the third day; kozhupu (cholesterol) the fourth day; enbu (bone) the fifth day; moolai (bone marrow) the sixth day and sukkilam/suronitham (sperm/ovum) the seventh day. From chyle the essentials are taken up to semen. Saaram (chyle), senner (blood) and venner (sukilam) one day fuse to form vinthu (sperm)¹².

Formed from Moolai thathu (bone marrow)

Modern research has shown early stage sperm cells had been created from bone marrow (moolai). Stem cells were isolated from bone marrow of donors (male) and then cultured and identified in the laboratory. Some were induced to grow into spermatological cells, which generally become sperm cells. Transplantation of cells inside the testis was carried out in mice¹⁴.

Formed out of water Element

The physical component of the water element are blood, fat, semen, urine and brain. Iyyam (bio energy-water) one of the three humor is condensed from the elements water and earth and it lies in the sperm, fat, blood, bone and bone marrow. Measurement of semen (water component of the body) is ½ anjali (two palms held together to shape a bowel like structure and its capacity is called one anjali)¹¹.

Spermatogenesis

Table 3: Spermatogenesis in Siddha¹⁵

80 drops of blood make	1 drop of semen
80 drops of semen make	1 sperm
6400 drops of blood make	1 sperm

Spermiogenesis

Saaram (chyle), senner (blood) and venner (sukilam) one day fuse to form vinthu (sperm) which grows in the body for 21 days (yel mundru thenam) which can be correlated to the differentiation of spermatids to mature sperms¹⁵.

Nutrition

Vani (fire) gives nutrition to sperm. For processing saaram to sukkilam, agni (basal metabolic heat-samakini) is needed. Testosterone, FSH and LH are responsible for stimulation of spermatogenesis process. Stimulation also needs agni. Agni (Vani, Azhal) is formed from the element fire and is the principle of transformation energy and governs heat and metabolism in the body and is concerned with the digestive, enzymatic and endocrine systems^{12,7}.

Sukila Gunam (Physical Characteristics of Semen)

Table 4: Sukila Gunam

State	Water
Colour	White and butter –Excellent White and curd -Very Good White and milk- Good
Specific gravity	Should sink in water
Taste	Innipu (Fructose)
Chief elemental composition	Fire and water
Predominant humor	Aiyam

Saint Sivavakiyar says, **Unmayana sukila ubayama erunthathum, venmayagi neeriley virainthu neera thanathum**. Semen ejaculated is milky white in appearance due to prostatic secretion. Immediately after ejaculation, sperm remains immotile for the reason it is viscous due to coagulation and becomes highly motile as the coagulation dissolves. The characters relating to sukkilam will be comparatively better in iyya thegi individual due to similarities of gunam^{12,15,16}.

Function of the Sukilam

Responsible for reproduction¹².

Hormone

Saint Thiruvalluvar nayna vettiyan says, **Vinthu kudi iruntha thirunattai vitaen, marukinra kathirikol pattathanil, vinthunindru vilangunathi mayathuley, vilangu swathittanam veliyilethan**. Swathittanam can be correlated to adrenal gland that secretes testosterone¹⁶.

Siddha Physiology

Secretion of semen may be controlled by moolatharam (resting place of serpent power/rectal plexus), manomaya kosam (psychic system), swathithanam (psycho physical center above moolataharam) and iyyam (water). As per saint Thirumoolar, uhayathil vinthuvil ongum kuntalium. Kuntalini (serpent form of energy) facilitate the act of emission of semen. Ejaculation is also

controlled by kanma-inthiriyam (motor organs), abana vayu (downward air) and sadhaka pitham (accomplishment fire)^{12,16}.

Uyir thathukal (Bio Energetic Principle)^{7,12,17}

Vali (Bio Energy Air)

It is located in idakalai, abanan, kama kodi (spermatic cord). Vali is the principle of kinetic energy in the body and is concerned with the nervous system and with circulation. It activates and coordinates the seven udal kattugal (physical constituents). Abanan one of the components of vatham is the downward air responsible for excretion of semen.

Azhal (Bio Energy Fire)

The heat of azhal is responsible for many actions. Azhal lies in blood and chyle. Sadhaka Pitham seems to have the psychosomatic role in the formation of semen and human desires. Azhal is the principle of transformation [conversion] energy and governs heat and metabolism and is concerned with the digestive, enzymatic and endocrine systems.

Iyyam (Bio Energy-Water)

It lies in semen, fat, blood, bone and bone marrow. Iyyam is the principle of stabilizing energy and governs growth in the body and is concerned with structure, stability, lubrication and fluid balance. Tarpaka Kabam [CSF fluid] has an important role in production of sukilam. Major component of human semen is cerebrospinal fluid.

NOI MUTHALNAADAL (AETIOLOGY)

Genetic Cause: Theka Ilakkanam (Bio Type)

Vali (Ectomorphic Constitution) –
Thatu nashtam (Oligozoospermia)
Pitham (Mesomorphic Constitution) –
Arpa sukilam (Oligozoospermia)
Aiyam (Endomorphic Constitution) –
Inthriya kuraivu (Oligozoospermia)^{12,16}

Infections

As per saint Thirumoolar, **Varaiyana garbathil malatu pulu pugil, viraiyana vintuvai virainthun didumel**; Sperm is eaten up by malatu pulu (may be antispermatogenic antibodies). Sukila piramium/megam (male gonorrhoea); Koruku noi (Syphilis)^{5,12}.

Testicular Cause

Beeja Thamba Vatham / Neerandam (Hydrocele); Asuva vatham (Crypto-orchidism); Vithai Vatham (Orchitis) and Sukila Pitham (Varicocele).

As per Dhanvantari vaithiyam, Thakathan karbam thanai thavirthidum, kanavu thanil sakidium sukilathai sukila nalam kanthum, mika sukilam polneeril vellaiyum kannum **kandal, sukila pitham** menrar solinar sruthivallor. Here sukila nalam kanthum refers to burning sensation in ejaculatory ducts^{12,16}.

Traumatic Causes

Surgery or accident, sometimes leads to varmam (vital points/subtle energy station)- Kallidaikaalam /Vithu varmam; Beeja kaalam - Testis will be found ascended through the inguinal canal¹⁸.

Psychiatric Disease

In Mathazhivu /Mathathiam, udal thathus (physical constituents) including sukilam will be affected¹⁸.

Taste

Table 5: Consequences of Affected Taste¹⁹

Increased Pulipu (sour)	Weakness of genital organs
Increased kaippu (bitter)	Abnormal change in semen qualities
Increased kaarppu (pungent)	Oligozoospermia
Decreased innipu (sweet)	Lack of maintenance of seven body tissues

Dietary Factors

Macrotyloma uniflorum, yam, mango (unripe), bitter gourd, sesban leaves, lily pond water and red water may affect male infertility^{10,20}.

Life style

Intercourse with elder female, restraining ejaculation (one of the 14 functional natural urge) wearing slippers made of *Acacia catechu* (karungali), *Cedrus deodara* (devadaru), *Wrightia tinctoria* (vetpalai), *Morinda citrifolia* (nuna) and *Ficus religiosa* (aal) may affect male fertility^{10,15,16}.

Gonado Toxic Drugs

*Nicotiana tabacum*²⁰

Diurnal Factors

Intercourse during digestion of food, intercourse in day time [intercourse at improper time] and intercourse during sunset¹⁶.

Oligozoospermia Co express with the following Diseases

Table 6: Diseases that Co expresses with Oligozoospermia²¹

Perumanjal kaamalai (Jaundice)
Eraippu (Bronchial asthma)
Vinthu Suram and vali azhal suram (Fever)
Aiya Pandu (Anemia)
Mukutra Kalladaippu (Urolithiasis)
Vali Neer kiricharam (Urinary tract infection)
Neerazhivu avathai (Diabetic complication) – In second stage sukilam ketu (sperm destruction) and oli kunrum and fifth stage will cause vinthu nashtam (Oligospermia).
Elaippu Noi (Pulmonary Tuberculosis)
Eruvaaimulai Noi (Hemorrhoids)
Karumpa nasai ammai (Measles) - Affect semen and can make the patient maladu.

PATHOLOGICAL STATE OF SEMEN

Table 7: Signs of semen in Male Infertility as per saint Yugi ^{4, 22, 23}

Devoid of sweetness [Absence of fructose]	Normal value of seminal fructose is > 13 µmol/ejaculate (WHO 2010)
Floating on water [decreased semen specific gravity]	Normal specific gravity of semen is between 1.020 and 1.040 which is higher than that of water and when it reduces its floats which is the sign of infertility
Absence of live sperms [Absence of vitality]	Normal value of live spermatozoa is 58% (WHO 2010)
Foamy urine	Foamy urine is most likely to appear in case of urinary tract infections and retrograde ejaculation, a condition in which the sperm reaches the urinary bladder

Increased sukkilam causes increased lust, libido and urinary calculi. Decreased sukkilam causes failure in reproduction, pain in genitalia, dropy ejaculation of semen/ or blood during copulation, pricking pain in the testis, inflammation and blackening of genitalia. Semen if restrained results in fever, retention of urine, joints pain, heaviness of the body, heart diseases and white discharge⁷.

Pathogenesis

Three humors play a major role in the initiation of the disease. Vitiating vatham, pitham and iyyam thodam consecutively vitiates sukkilam (semen/sperm) and decreases it either quantitatively or qualitatively. Mental stress and strain reduces sperm count in which vatham and saaram are deranged (air element has the property of mental agony, saaram gives mental and physical perseverance). In repeated intercourse since fire element is affected, sperm production is decreased (fire element has the property of sexual intercourse). In excessive sexual abstinence, the activity of vayu is deranged and sperm motility is affected

(vali is the principle of kinetic energy). Even if saaram is well nourished and absorbed normally, it should be available up to sukkilam. In excessive physical strains, most of the saaram is utilized and does not reach till sukkilam^{7,10,12,19,20,21,24}.

Intercourse with elder female causes iyyam derangement. In Testicular atrophy vali is deranged (abnormal functions of deranged vali is the weakness of functional organs) and decreases spermatogenesis. In inflammations (orchitis, prostatitis), mumps, jaundice, urinary tract infection, seminal infections and fever pitham is deranged. The maturation arrest in spermatogenesis can also be considered as pitham derangement since azhal is the principle of transformation [conversion] energy. In crypto orchidism, pitham is deranged which affects (temperature difference) the testis. Obstructive pathology (ejaculatory duct) can be considered as iyyam derangement (due to the properties of solidity, nature of immobility). Alcohol is thamo gunam (vatha) food articles and hence derangement of vali causes weakness of functional organs. *Nicotiana tabacum* (Tobacco, smoking) affects pitham and destroys sperm (vinthualikum)

Table 8: Deranged three humors and affected semen quality

Sperm production (Oligozoospermia)	Kabam derangement (iyyam lies in semen)
Sperm motility (Asthenozoospermia)	Vatham derangement (kinetic force)
Sperm morphology (Teratozoospermia)	Iyyam derangement (governs growth, concerned with structure)
Azoospermia (Obstructive pathology)	Absence of fructose (innipu) in semen due to iyyam derangement (innipu (sweet) - water + earth = iyyam)
Necrospermia	Vatham (kinetic energy) is decreased, iyyam (immobility) is increased
Low viscosity	Vatham derangement (dryness) and high viscosity is due to iyyam derangement (solidity, fluid balance is the property of iyyam)
Semen liquefaction	Iyyam derangement (fluid balance)
Semen volume	Semen volume is affected due to iyyam derangement (iyyam - water and earth element)

Pungent (kaarpu - air and fire) and bitter (kaipu- air and space) taste causes sukila kedu (destruction of sperm production) due to derangement of pitham (fire) and vatham (air). Saaram is impaired due to deekshagni- (fiery digestion) in which due to increased digestive fire food gets digested along with essence and manthagni in which food is digested delayed. The affected saaram affects sukkilam. When pitham (transformation energy) is affected, spermatogenesis (primary spermatocytes to immature sperm) and spermiogenesis (immature to mature sperm) will be affected. Iyyam derangement increases the viscosity of the semen, which indicates infection in the genital tract or the presence of antisperm antibodies. Viscous interferes with the determination of motility and antibody coating of spermatozoa. Vitiating iyyam condensed with the element earth, has the property of conglomeration, solidity and viscous which leads to the formation of agglutination of sperms due to increased viscosity of semen, which hampers the motility of sperms and results in asthenozoospermia.

As moolatharam is in the akkini mandalam, any pathological condition here can harm the moolakini and eventually derange the pitha humor. Symptoms are produced when deranged pitham affect the seven thathus. The disturbances in seeva agni/pitham

[basal metabolic heat] is due to food articles and behaviour. Sour, pungent, salt taste; unboiled food; sorrow; hot temperature, angry, insomnia and excessive coitus leads to vishamagni (toxic digestive fire). In which digestion is delayed due to deranged and displaced samanana (digestive air) which leads to toxic digestion and which will produce amam (indigested food toxin). Amam is the toxic material produced from undigested food and is a disease connected with the mucous (viscous fluid-iyyam) in the intestines. Iyyam gets vitiating by amam [free radicals, reactive oxygen species] which is responsible for the improper production of rasa thatu which finally results in improper nourishment of sukila thatu.

Siddha Saint Yugi muni Symptoms

Lack of sweetness is due to iyyam derangement. Frothy micturition is due to iyyam derangement (iyyam is eliminated through urine). Semen floating on water is due to vatham derangement which has the property of lightness. Uyirupu illathathu (Necrospermia- absence of live spermatozoa) due to vatham (kinetic force) and iyyam (immobility) derangement.

Associated Symptoms

Ejaculatory Dysfunction - Vali (abanan) is deranged in ejaculatory dysfunction. It is the downward air and responsible for excretion of semen.

Erectile Dysfunction - Vali is deranged in erectile dysfunction. Vali is concerned with the nervous system and with circulation.

Nocturnal Emission - Pitham is deranged in nocturnal emission. One of the symptoms of sukila pitham (kanavu thanil sakidium sukilathai) ^{12,21}.

SIDDHA MARUTHUVA NOI KANIPPU MURAIGAL(DIAGNOSTIC METHODOLOGY)

Neykkuri (Oil on Urine Sign) - Slow dispersal/formation of sieve/ flower/ animal/ irregular margin

Naadi (Pulse) - vali naadi, vali azhal naadi, azhal vali naadi, pithathil vayu

Manikadai (Wrist Circumference sign) - 8 ½ inch^{7,12,4}

Sukila Thervu (Semen Analysis)

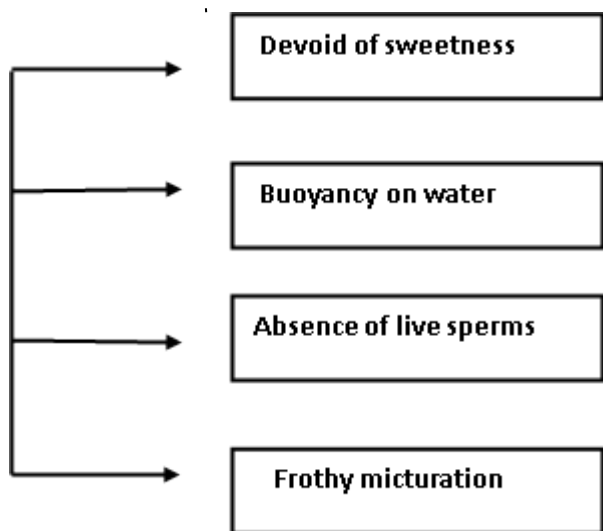


Figure 1: Sukila Thervu in Aan maladu

Noi nidhanam (Prognosis)^{12, 25}

Table 9: Indication of Semen colour in Prognosis

Colour	Prognosis
White and butter like	Excellent
White and curd like	Very Good
White and milk like	Good
White and akin to buttermilk	Fair
Akin to the honey in colour and consistency	Average
Akin to the ghee in colour and weight	Poor
Akin to the toddy in colour and thickness	Very poor
Akin to the water	Bad

Excellent, very good, good – can be controlled through medicine. Other types are difficult, but can be normalized by medicine that increases the quality of semen

Neikuri- Saladai kan (sieve) - Curable as per saint Theriyaar and intractable as per saint Gowthamar.

Manikadai- 8 ½ -curable

TREATMENT

Karpa marunthu (Rejuvenation)

Karpa Yogam- Vajira asana, Pranayamam, Yoga muthirai, Sarvaangaasana

Thathu karpam- Poorna Chandrothayam

Seeva Karpam- Inthira Koba poochi

Siddha Panacea- Muppu [Supreme Salt]- Normalize the body constituents^{7, 18}

Medicinal Water

Thathuundakum (Spermatogenesis)

Jambolana tree roots soaked in water, cooked rice water kept overnight, hot water kept in a gold pitcher and in iron pitcher, rain water before it falls down on earth and hot water drink^{10,11}.

Herbs and Animal Product

Greens of drumstick, climbing brinjal, spinach, *Amaranthus tritis*, wheat; plantain flower; coriander leaf, black plum; pomegranate; mango fruit, black grapes, cashew, almond and walnut, elephant’s milk; fresh milk (cow’s milk) for 3 ¼ nalgai (5hrs), milk skin or lactoderm; mixed ghee (buffalo, goat and cow); thamboolam (conventional betel chewing), meat of domestic pig (Oor panri); black bug stag (Kalai man); meat of duck (Vaathu); white breasted kingfisher (Vichuli); Ruddy Shelduck (Thara kari); spotted dove (Mani pura); goat meat (Velladu), Sea fish like emperor (Valai), eel (Vilangu) and ray fish (Thiru kai)^{10, 20}.

Season ¹⁰

Pinpanikalam (late winter season) induces spermatogenesis

Noi anuga vithi olukkam (Preventive techniques)

Coitus during day time is not advised. Avoid sexual act with elder women (increases iyyam). Ideal time interval for coitus is once in a month. The coitus performed during the time of digestion (after a full meal) should be avoided since because saaram may not be completely nourished which is the first precursor in the formation of semen. During Sunset avoid coitus^{7,16,21}

Duration of treatment

Every disease has a fixed period of treatment for complete recovery. For oligospermia (Thathu nattam) the duration of treatment is one year¹¹.

CONCLUSION

This manuscript has presented insight knowledge about Siddha science in male infertility and has presented it as a tool for further research.

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