



## A REVIEW ON METHODOLOGY AND SIGNIFICANCE OF PULSE DIAGNOSIS (NAADI) IN SIDDHA SYSTEM OF MEDICINE.

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### ABSTRACT

The Indian subcontinent bounded by a variety of diverse health traditions with traditional medical heritage which dates back to pre historic ages. The diagnostic methods in Siddha medicine are very unique and solely depend upon the clinical acumen of the physician. In this system, Pulse diagnosis called as Nadi Paritchai is a chief diagnostic method in Envagai Thervu (Eight fold examinations). Though it is a quick, non-invasive bedside diagnostic tool, the methodology of pulse diagnosis, its relationship with the three humours vatham, pitham and kabam and its variation in association with time, season and presenting or hidden illness still lacks scientific explanation and these are considered as myth or fallacy in present contemporary world. The Siddha texts explains where pulse should be recorded, when it should be recorded clearly in traditional Siddha texts as a crystal clear phenomenon. The present literature analysis has intended for extensive and in depth search on Siddha classical texts on Pulse diagnosis such as its relationship with times of the day, seasonal variation, impact on lunar phases and pulse movement. The search results were scientifically correlated using web based search engines for relevant recently published research articles. The results scientifically explore the science behind the Siddha concepts and thus aid in globalization of traditional concepts of Siddha system.

**KEYWORDS :** Pulse reading, NaadiParitchai, Siddha diagnostic tool, Siddha, Traditional methods

### 1. INTRODUCTION

Naadi can be defined as the channels of life forces for the dynamics of pran, the force/energy which sustains the life in the body. Nadi is a waterway within the body in the form of blood vessels and the term Nadi Paritchai indicates the examination of pulse and the absence of pulsing denotes death. The pulse is the individuals Respiratory & Cardio -Vascular System represented by the three Thodams - vatham, pitham and kabam which helps us for diagnosis & prognosis. The pulsation includes Arterial pulse & venous pulse.(1)

Pulse reading (Naadi Paritchai) is one of the foremost and chief diagnostic methods in Siddha system of medicine. It actually reflects the imbalance in tri-humours vatham, pitham and kabam which are the subtle unifying bio-forces enabling the normal physiological function of our human body. Scientifically, though there is only one flow of blood vessels Siddha concept recognizes the pulse three components such as vatham, Pitham, Kabam which can be felt in the index finger, middle finger and ring finger respectively over the radial artery of the hand. The important points to be in mind before reading Naadi are Time/Season, Place, age and physique of the subject.(2)

### 2. OBJECTIVES AND METHODOLOGY :

#### Examination of Naadi

While observing Naadi, the foremost thing of the physician is to sit comfortably and facing the subject. The right hand is to be examined in males while left hand in female. The elbow of the patient is semi flexed and the patient's right wrist is to be held on his lateral aspect up from the left hand of the physician holding the wrist of the patient between thumb and three fingers. Index finger at the top near to the wrist joint, then middle finger followed by ring finger at the last. The three fingers should be gently pressed and released frequently and simultaneously to feel the exact conditions of the Naadi. Thus different pulses are felt differentially in the same vessel.

A Skilled Siddha physician is able to detect the different patterns of vibration that represent the various abnormalities within the body without the need for expensive laboratory investigations. The rhythm and vibrating movement of these distinct pulses reveal the physician about the strength and vitality of each internal organ and to diagnose diseases. Naadi can be read in ten places all over the body. They are Inner side of the ankle (Posterior Tibial artery), Genitals (Femoral Artery), Umbilicus (Abdominal aorta), Chest (Auxillary artery), Ears (Superficial Temporal Artery), Nose (Angular Artery), Neck (Carotid Artery), Hands (Radial Artery), Eyebrows (Supra orbital Artery) and Centre of the scalp (Anterior fontanelle).

#### Methods of Naadi paritchai (Pulse diagnosis):

Pulse diagnosis is made through two methods and two levels of pressures of fingers. They are Simple method or simple pressure and medium method or medium pressure.

#### a. Simple method or simple pressure:

The physician should place his three fingers just below the radial crust to find out the predominance of the Thodam in body. This pressure denotes the activities of Vatham, Pitham and Kapham when the finger is applied on the wrist.

Pulsation in first finger denotes the Vatham thodam in body.

Pulsation of middle finger denotes the Pitham thodam in body.

Pulsation of third finger denotes the Kapham thodam in body.

#### b. Medium method or medium pressure:

By this method a small pressure is adopted just below the radial crust to find out the predominance of Thodams in the body in detail. This method is very important for clinical as well as diagnosis point of view.(3)

#### Naadi based on lunar phases

According to Siddha system there exist an interconnection between the universe and human body which is represented by the phrase Andathil ullathey Pindam (Macrocosm exist in microcosm). In this way the lunar-pulse axis has been described in Siddha literature. If Vatham is prominent in the morning during Monday, Wednesday, Friday and Thursday in waxing moon (Sukkilapatcham) it indicates a healthy mind and body. Similarly if Pitham is prominent in the morning during Sunday, Saturday and Thursday in waning moon (Krishna patcham) the body and mind will be healthy.

Scientists are well aware that in different phases of the lunar month, the gravitational pull of the moon on earth varies and the amplitude of ocean tides also changes according to lunar phases. Myers (1995) defined two theories to address the influence of the moon on humans termed as "biological tide". In both of them, the gravitational effect has been directly or indirectly linked to the changes of biological activity during lunar cycle. As the water mass of the planet is affected by the gravity, so the water mass of the body (intracellular, extracellular, intravascular and intraluminal) may also be affected. The second theory emphasizes that it is the disturbance in the electromagnetic field of the earth caused by lunar gravitational changes during the lunar cycle that brings about the behavioural changes.(4)

**Table – 1 Naadi Examination Based On Months (5)**

MONTH	TIME
Chithirai (April 14- May 14) Vaikaasi (May 15- June 14)	Sunrise
Aani (June 15- July 14) Aadi (July 15- August 14) Aippasi (October 15-November 14) Kaarthigai (November 15-December 14)	Mid day

Maarkazhi (December 15- January 14) Thai (January 15-February 14) Maasi (February 15- March 14)	Sunset
Panguni (March 15- April 14), Aavani (August 15- September 14) Purattasi (September 15-october 15)	Night

Upon keenly analyzing the science behind this concept of effect of seasons on Pulse diagnosis, it can be well understood that weather is highly correlated with the season. Weather is often described as temperature, precipitation, and wind speed, but the most significant driver of weather is barometric pressure. Air moves from areas of high pressure to low bringing with it wind, and changes in temperature and precipitation. A research study by Book GA et al., found that season and weather have a known and appreciable effect on the human body and has been shown that changes in environmental temperature and barometric pressure are known to affect blood pressure and oxygen saturation. Therefore all these changes can be reflected in the Pulse diagnosis of the subject.(6)

Guru Naadi will indicate the life force or the soul itself. It will be found in front of Pitham, Naad and strong enough to control Dhasa Naadis. It pervades throughout the body in all the systems including brain. It mingles with three Naadis namely Vatham, Pitham and Kapham. It crosses like a scissors and controls the three Naadi (humours) (Idakalai, Pingalai and Suzhimunai).(7)

**i. Guru naadi and its significance:**

Guru Naadi penetrates into Slethma Naadi, which indicates the symptoms for death. It total diminishes in case of diarrhoea, pain in abdomen and swelling of the extremities. If Guru Naadi passes sideways it will coincide with Slethma Naadi which will cause the increase of Slethma Naadi. Death is sure to occur, if Guru Naadi flutters like locust in Kapham Naadi.(7) The patient can have boating and itching sensation in the body, if GuruNaadi runs like centipede in Vatham. GuruNaadi runs like tortoise in increased pitham and fever and also if it is furious like a lion in Slethpanam, delirium (Sanni) would arise. (2)

**Table – 2 General Characteristics Of Pulse (naadi) (8)**

Character	Vatham	Pitham	Kabam
Felt by	Index	Middle	Ring
Rhythm	Irregular	Regular	Regular
Amplitude	Low	High	Moderate
Gait	Quick and leaps like a frog	Prominent, strong, high amplitude like snake	Deep, slow, broad like elephant
Tension	Low	High	Moderate
Volume	Low	High	Moderate
Temperature	Cold	Hot	Warm to cool
Texture	Rough, hard	Elastic, Flexible	Soft , thick

**Table – 3 Pulse Predominance And Its Indication Of Diseases (9)**

Predominant pulse	Significant symptoms
Vatham	Flatulence, Pain, Loss of appetite, Abdominal distension, Diarrhoea, Piles etc
Pitham in vatham	Body pain, Indigestion, Regurgitation, Constipation, Lethargy , fatigue etc
Kabam in vatham	Seasonal asthma, Cough, Cardiac diseases, Fever, Respiratory problems etc
Pitham	Bone fever, Body heat, Memory loss, Excessive thirst, Menorrhagia etc
Vatham in pitham	Acid peptic disease, Oligospermia, Abdominal diseases, Indigestion, etc
Vatham in Kabam	Dropsy, Jaundice, Eye disease, Sinusitis, Loss of appetite etc
Kabam	Tuberculosis, Cough, Bronchial asthma, Vomiting, Anemia, etc
Pitham in kabam	Dryness of mouth , Body pain, Fever with chills, , Hiccups, Jaundice, etc
Vatham in kabam	Abdominal distension, Hiccups, Nausea, Pain, Delirium, Hemiplegia etc

**Significance of Naadi in disease prediction and mortality**

The cause of this knowledge of pulse diagnosis is the cognition based on the similitude. (10) The Siddha system has utilized this methodology in the advancement of the knowledge of the health

science. Diagnosis using pulse is a very important aspect of Siddha and is the method developed by *Siddhars* to extend our sensual perceptions to the interior of our body to diagnose and confirm illnesses. In other words, it performs the job of present day inventions like stethoscope and sphygmomanometers. The pulse movements (pulsations) are analogically compared to the movement of different animals for example Cock like- Diabetic Albuminuria, Elephant like-Lymphatic obstruction, solid edema Lymphosarcoma, elephantiasis, Leech like - Arthritics, Gout, Worm like - Parasites , Ants like - Terminal illness according to the intensity felt for easy interpretation.(11)

*Naadi* can also be a predilection for death. Death can be surely predicted when *Kapham Naadi* independently doubles its ratio with the reduction or disappearance of *Vatham* and *Pitham*. Also when the *Naadi* is found agitated and precipitated on the thighs, the waist and below the chest and if the patient is having excess of thirst, dryness of tongue, loss of luster in the eyes etc, a bad prognosis can be expected. The flutter of Pulse like a locust or scorpion sting can indicate the expectancy of death. The Pulse diagnosis can also indicate the accuracy of death if *Kapham Naadi* runs independently in which death can likely occur on the next day, If the *Pitham Naadi* diverts and pass independently, death can likely occur in third day; If the *Vatham Naadi* diverts and pass independently in eight days and many such indications have been indicated in the traditional texts.

**Recent researches on standardization of Pulse diagnosis**

In recent research, various pulse diagnosis studies have been conducted with the help of sensors. Many pulse-measuring devices have been developed based on different sensing techniques, such as photoelectric, and piezoelectric methods, they are mostly single-probe sensors that convert the spatial variations of pulses into a simple output of electrical signals. These single-point sensing devices can only obtain limited information because they cannot reflect the detailed changes in the pulse. This device is able to identify the important characteristics of the wrist radial artery, including strength, rate, length, width, and trends in pulse conditions, using three-dimensional pulse mapping (3DPM) of the pulse.(12)

The Photoplethysmography (PPG) sensor module is similar to the design of Galvanic skin response(GSR) sensor. In a research study, PPG measurements were collected from the wrist of the patients based on the varma points. Once the pulse wave systolic peak PWSP, the pulse wave begin (PWB), and the pulse wavediastolic peak (PWDP) were identified, we could then compute the eight time-domain features based on PPG waveform and it is equated for accurate pulse diagnosis. The measured data were first stored in the phone and then transmitted to the cloud server at the end of each measurement process.(13)

**3. CONCLUSION :**

The Siddha texts indicates crystal clear methods for the pulse diagnosis in specific terms of time, season, sex and applies its variability in comparison with movement of various living and non living things as a measure to diagnose the disease. Though modern scientists overlook this diagnostic tool as an old fashion myth, there are vast scientific reasons behind this diagnostic tool that has to be still explored. This review has made a preliminary attempt to validate the Siddha theory on pulse diagnosis with recent scientific speculations and researches. This would enable the traditional concepts, diagnostic methods of this ancient system of medicine to have worldwide attention.

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