



A comprehensive knowledge on Nadi Pariksha

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Abstract

Nadi Pariksha is the science of observing the pulse from a perspective of diagnosis of the human body, mind and the sub-consciousness. It is commonly known as Pulse diagnosis. *Nadi Pariksha* had got its significant role in the physiological and pathological conditions. Since the past scrutiny of pulse has been one of the most important diagnostic tools. The art of science of examination of pulse was well developed in ancient India. *Nadi Pariksha* has been said as one of the *Ashta Sthana Pariksha*. This system of examination can't be practiced easily because of non-availability of detailed description about *Nadi Pariksha* in *Ayurvedic* literature and lack of practice in the field of science. *Nadi Pariksha* is an important tool for diagnosis in all the stages of *Vaya*. Luckily some of the ancient *Ayurvedic* books are still available to us. So, to impoverish the cognition, a little attempt is made to put.

Key words: *Kala, Nadi Pariksha, Pulse, Nadi-Gati, Tri-Dosha, Nadi-Yantra.*

INTRODUCTION

The great heritage for us is *Ayurveda*. *Ayurveda* gives everything to human for good living. To know about wellness of individual *Nadi-Pariksha* is one of the important diagnostic tools. *Nadi Pariksha* is one among the *Asha Sthana Pariksha*. *Nadi Pariksha* is an ancient *Ayurvedic* technique of diagnosis through the pulse. It can accurately diagnose both physical and mental diseases and imbalances. This diagnostic tool forewarns us of potential health risks. It is assigned that the knowledge of pulse science was originated some years ago in various medical therapies of the world, like in Greek, Chinese, Turkish, Arab, Homeopathy, Allopathic etc. and it gained as an essential tool for proper diagnosis. From the past decades *Nadi* has been recognized as the most fundamental sign of life, and the pathology as well as physiology of the *Sharir* is being

recognized by the *Vaidya* through proper *Nadi-Pariksha*. Even in today's hectic lifestyle, under emergency clinical conditions, modern physicians seek help by the *Pariksha* of *Nadi*, as it is thought to present the latest picture of the working efficacy of heart, and the rate, rhythm, volume and character of the pulse indicate clearly the condition of the patient in various aspects. In this article different type of *Nadis*, their location, *Nadi Pariksha Vidhi*, *Nadi Lakshanas* (features of *Nadi*) in relation to *Doshas*, different *Nadi* in females, males, old, young, etc, *Nadi* according to different conditions, *Nadi* according to different diseases, healthy and unhealthy persons *Nadi*, *Nadi Gati*, *Panchbhotika* difference of *Nadi*, *Nadi* according to *Tri-Doshas*. Modern correlation of *Nadi* is with pulse. *Nadi* instrument are explained.

Review on topic:

In *Ayurveda* it is clearly mentioned that in the world three main forces can be recognized as *Soma* (moon/water), *Surya* (sun), and *Anila* (air) with their action *Visarga*, *Adana* and *Viksepa* respectively. In the same way the body is maintained by three humors viz. *Kapha*, *Pitta* and *Vata* having the same qualities and actions respectively¹. *Tri-Dosha* is the fundamental principle in *Ayurveda*. These are present all over the body in different properties and are correlated with

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individual constitution². The *Nadi-Pariksha* is the diagnostic way to assess health status of the individual in terms of *Tri-Doshas*. The explanation of *Nadi* is different in different *Samhitas*.

The detailed description about *Nadi Parikshana* is given in *Laghutrayi* as comparison in *Brahtrayee*. In *Sharangadhara Samhita Nadi* is explained in 3rd chapter and in *Yogratnakar* also. And *Basavarajiyam* is also one of those treatises which have highlighted this ancient type of examination of the patient. *Nadi Pariksha* is one among the *Ashtasthana parikshas*. So many ancient *Ayurvedic* texts highlighted this technique. The huge propagation of *Nadi Pariksha* was started from *Yogasastra* and *Sidhasastra*. The Philosophical knowledge on *Nadi Pareksha* is transferred from *Shiva* to *Brahama* then to *Indra* and finally to *Kanada*. The famous research scholar on *Nadi Vigana* was *Mahrashi Kanada (Vidhyotani)* and second one was *Ravana (Sedheda)*.

The word *Nadi's* derivation is from *Amarkosh 'Nat' Avaspandane Dhatu* it forms *Nate*. The Synonyms of *Nadi Sanayu, Hansi, Dhamani, Dhara, Tantuki, Jivangyana, Dharni, Jevashksi, Rasayani, Seera*, in English also nerve, pulse, artery, vein, lymphatic vessels. The total numbers of *Nadi* in human are 72 thousand. These are present all over the body.

From pulse diagnosis we can know the good or bad of the individual. The *Nadi Devta's* are³⁻

DOSHA	DEVTA
Vata	Brahma, Vayu
Pita	Shiva, Surya
Kapha	Vishnu, Chandra

For *Nadi Pariksha* it is important to know about physician and patient character that are⁴⁻

CHARACTER	VEDYA	ROGI
Appropriate	Stable mind, healthy body and mind, easily seated, Happy one.	Clear all urges, quietly seating
Inappropriate	Addicted, unstable mind, suppression of urges, greedy, desired.	Frequent bath, hungry, thirsty, sleepy, after exercise.

Examination of the Pulse:

An examination of the pulse consists of feeling the pulse with the tips of one's fingers. The pulse is to be felt at the wrist (feeling of radial pulse). In the case of male patients, it is to be felt at the wrist of the right hand and in that of female patient's wrist of the left hand. There are many other parts of the body where the course of the

circulation of blood may be felt. For the convenience's sake, however, the wrist is preferred. When the patient is in the last state, his pulse, which cannot be felt at the wrist, may be felt below the ankle- joint, or at the throat or at the chest. The physician should hold with the second, middle and ring finger the wrist of his patient, supporting the latter's elbow with his left hand. He should examine the quickness or slowness of the beats and their various other characteristics which may be better learnt from the practical instructions of the preceptor given at the patient's bedside than from any remarks^{5 (a)}. The throbbing pulse beat felt under index finger is referred to as *Vata*, middle finger as *Pitta*, and ring finger as *Kapha*^{5(b)}. In other side the accuracy of the diagnostic method and interpretation of *Nadi Pariksha* is dependent upon the subjective judgment and the result of *Nadi Pariksha* are often varies among *Ayurvedaacharyas* due to variation in skills.

Susruta has also described that the *Dosas* are circulated in the body through *Siras* (blood vessels), and so they are called flowing to all (*Sarva Vahah*)⁶. This *Vata- Pitta-Kapha* in the body is recognized by *Nadi-Pariksha*⁷. *Savil* narrated that many of the indications obtained from pulse do not depend upon a comprehension of the circulatory conditions which the varieties of the pulse denote, or indeed, upon a knowledge of circulation at all⁸. For detailed and good knowledge in *Nadi* it is must to know full information about *Prakrit* and *Vikrit* stage of *Tri-Dosha* and *Dosha* functions. According to *Charaka*, the *Nadi* is called a channel, which may facilitate the flow of nutrients and energy at the cellular level, through circulatory process, accompanied by breath activity⁹. *Michael* described it as energy vessels connected to various energy centers. KNOWLEDGE ABOUT *JIVNADI*- It is radial artery in wrist joint position. It is one of the important diagnostic *Nadi*. *Acharya Ravana* mentioned this *Nadi* as *Jivnadi*. It is easy to diagnose, *Tri-Dosha* use as *Mula* of *Nadi-Pariksha*. It is superficial as compared to other *Nadi*.

A Healthy Man's Pulse:

The pulse of a healthy man is slow and regular. The beats are distinct from one another; their strength is also uniform. The pulse of a healthy child differs from that of a healthy adult; the former is quicker than that of the latter. Again, the pulse of a healthy adult is not uniform all day long. In the morning it appears to be cool; at midday it seems to be hot; while in the evening it becomes quicker^{10 (a)}. Pulse which beats 30 times minimum in one speed, is fully strong, all *Doshas* are in their proper place, it must neither be slow nor high in speed, in its normal position, in pressing the pulse it must not be slow in these all conditions pulse is in good form^{10(b)}.

Speed Of Nadi¹³:

With the contraction and relaxation of heart muscles in blood vessels contraction occurs due to this, pulse beats are felt and diagnosis takes place. The movement occurs due to *Vyanavayu*.

Speed Denoter Nominal¹¹:

HEAVY SPEED	NORMAL SPEED	SLOWGOING SPEED	BHARAV	SPECIAL SPEED
Chapla, chandi, vakra	Sethra,	Seetmeta, Mandga	Suthala	Truteta
Vegvati, druta Deragha	Sethra balvati,	Seethtava, Shingati	Sukshma, ku Tela	Ateseeta
Vegvhani, vegvahni	Susethra,	Samurchita	Dhurgaha	Ushna
Tevra, tevravhani	Jada	Anuspanda	Krishha	Gourve
, Atichapla veshma	Stabhda	Mandgamna	Prabal,	Laghveveguate
Shigrasapandna, vyak Ulama	Pendasani bha	Sampulta, neesc Helta	Gatekoteela	Kathenasausna, ne eschla
Chala.	Prethula.	Mand	Vkra	Seetla, pratpta

Stages Of Nadi¹²-

INCURABLE	HEALTHY
Veshma, sansthanaveechuta	Prasana
Neshkramna, himvatveshada	Sarla
Bheta, mrenala, sarla, deergha	Safuta, sama
Adrika, sukshma manthra	Somya, komala

Speed OF NADI¹³ :

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According to Ayurveda natural speed of Nadi per minute:

VAYA	Speed Of NADI (in per pal) ¹⁴	Speed Of Pulse (in per minute)
Fetal & Neonatal	56	140
Under 1 yr Infant	50	125
Under 3 yrs child	40	100
From 7-14 yrs Youth	36	90
From 14-20 yrs	29	72.5
From 21-65 yrs	28	70
After 65 yrs	31	77.5

8 Position Of Nadi Pariksha:

Radial artery it is also called as *Jivnadi*, Posterior Tibial artery, Posterior Auricular Branch of External Carotid Artery, Common Carotid Artery, Facial Branch of the External Carotid, Superficial Temporal Artery, Lingual Branch of Carotid Artery, and External Ilium Artery. In these, most important is *Jivanadi*¹⁵.

Panchbhut Nadi Positions & Speed- it takes place in fingers like- according to *Harita*-

Panchbhut	Fingers	Speed
Bhotika tatv	Kaneshtika (little)	Dhergha, vartula
Apatatv	Anamika (ring)	Left/right
Agni tatv	Madhyama (middle)	Above
Vayutav	Tarjne (index)	Vakra
Akash tatv	Angusth (thumb)	Shunyaakara

According To The Dosha Speed Of Nadi- according to *Harita*-

DOSHA'S	GATI
Kapha, Pita, Vata	Udharvarekha(Dola)
Pita+Maruta	Snake like Vakraudharva(kundlini)
Kapha+Maruta	Vakraagnijwala, dhergha(Vakrachkra)
Pitta+Maruta	Kandukautpata (Chaplchkra)

The Pulse In Disease^{16 (A)}:

Hindu physicians describe the reading of pulse as if the sound of movement of different animals. The *Gati* of *Nadi* changes with the type of work being done or with the changes in the body or any disease. Some are shown below-

Disease condition	Nadi lakshana
Healthy person	Stable, strong
Mandagni, Dhatukshaya	Feeble, low
Samavastha	Hard, tense
Hungry	Unstable
Trupta	Stable
Jvar	Warm, increased rate
Vata jvar	Curved, unstable, cold
Pitta Jvar	Straight, long, increased rate
Shleshma jvar	Slow, very stable, cold, Picchila

Intake of curd, rice in <i>Jvar</i>	Hot, irregular
Intake of acidic substances in <i>Jvar</i>	<i>Mandhara</i> (churning)
Sexual intercourse in <i>Jvar</i>	<i>Slow, Vikal (irregular), fearful</i>
Atisar	<i>Similar to the movement of dead snake</i>
Arshas	<i>Stable, curved, slow, occasionally straight</i>
Ajirna	<i>Hard, Jada</i>
Chhardi	<i>Vimarga (trespassing), Parusha</i>
Trishna	<i>Dry</i>
Gulma	<i>Trembling</i>
Anah	<i>Dridha(hard), divided</i>
Udavarta	<i>Kathin</i>
Shula	<i>Trembling, stout, slow</i>
Amalpitta	<i>Vishirna, lean, dry</i>
Plihodar	<i>Vishirna, lean, dry</i>
Jalodar	<i>Full, weak, Vishirna, cold</i>
Pandu	<i>Unstable, sharp, alternately feeble, Perceivable</i>
Kasa	<i>Increased rate</i>
Prameha(DM)	<i>Weak, wet, irregular</i>
Kustha	<i>Harder, stable, mortal walk, full of nodes</i>
Bhangandra	<i>Little, weak, irregular, empty, faster</i>
Unmada	<i>Very slow, Spandanheen, weak, not on Pathway</i>

Nadi In Female Disorders^{16 (B)} - Naturally in females pulse is slow, soft to feel and is cold. These all are considered during *Parikshna*.

Conditions	Nadi Gati
Leecorrhoea	Nodes, empty, faster, weak, different than heart beats
<i>Somaroga</i>	Weaker, slower
<i>Yoniroga</i>	Slower, thicker in touch, harder
<i>Upsargaj roga</i>	Feverish pulse, faster, thicker in touch, Harder
<i>Yonikand</i>	Sometimes-faster/slower
In pregnancy	Heavy, Vata character, <i>Vakrta</i> .

Uncurable Symptoms By *Nadi Parikshna*-

If in an individual sometimes frequency of pulsation is very slow, sometimes it's very frequent, sometimes it is intermittent, and then sometimes it may or may not feel, then it symbolizes *Sannipatja Nadi*. When *Nadi* feels cool, or like electricity it shows that the person will survive only.

For one day it is the prodromal symptom. *Nadi* prodermal symptoms are different with the location of the *Nadi* of that particular area. Like- in *Janu* (knee) *Marma* no movement of *Nadi* occurs it means the patient may die within one month. *Harita* explains all symptoms relating to death of an individual within year/ 6 months/ month or in days^{17 (a)}. When *Nadi* Movements are more than 30 times in one step and less speed in own place. And *Nadi* which runs with stoppage is called *Pranaghatani Nadi*^{17b)}.

Special Instruction For *Vedya*¹⁸-

The *Vedya* who feels *Nadi*, concludes a diagnosis and after that if he washes his hands, in such cases it is seen that the disease of the patient gets cured like a feather is washed away with water.

Difficulties Connected With The Examination Of The Pulse-

The hurdles in the pulse diagnosis path are really very great. Mere instructions, however elaborate, cannot teach the students much. One should repeatedly examine the pulse of as many patients as one can, and carefully observe the peculiarities of its course. A good deal of time must elapse before one can succeed in mastering the subject. The help of the preceptor is absolutely necessary. European physicians recommend the use of the watch for examining the pulse. A rough knowledge is gained by this method¹⁹.

Importance Of *Nadi-Pariksha*-

It reveals the characteristics of *Tri-Doshas* in body and symptoms and prognosis of the disease as well as the function of the heart and heart beat²⁰.

Physiology Of Pulsation-

Pulse is a pressure wave that travels along the vessel's wall. The factors responsible for the pressure wave between vessel wall and the pulse are-

- the intermittent flow of blood from the heart i.e. the stroke volume output.
- the resistance to output of blood from the arterioles into the capillaries.
- the elasticity of the arterial walls.

Pulse Pressure-

the difference between systolic and diastolic pressure is called Pulse Pressure. This is felt as a throbbing pulsation in an artery during systole, as the elastic arteries are expanded by the blood being forced into them by ventricular contraction.

Pulse In Various Diseases²¹-

DISEASE	PULSE FORM
Alcoholism	Full pulse
Angina pectoris	High tension pulse

Anxiety	Feeble and low tension pulse
Appendicitis	Proportional to temperature
HT	Fast pulse
Indigestion	Intermittent pulse
Malaria	Slow Pulse
Myxodema	Slow
Peritonitis	Small, hard, rapid
Pneumonia	Rapid
Pregnancy	Slow regular and low tension
Renal coma	Hard
Typhoid fever	Slow
Sepsis	Rapid

Nadi Yantra Instrument²²-

Pulse diagnosis is as old as our *Ayurvedic* system. It helps to detect diseases with their *Doshas* present in the body. *Vaidya* feels the palpation of radial artery at three close yet precise positions. Instrument is formed by biomedical engineering institute to capture the signals from the radial artery. '*Nadi-Yantra*' which uses piezoelectric based pressure. Sensors to capture the signals from the waveforms obtained from our system concur with standard physiological arterial signals. Signal processing techniques were applied to obtain features such as- amplitude; power spectral density, band power and spectral centroid to reflect variation in signals and percussion peaks were identified.

There is enough evidence in *Ayurvedic* books that each and every *Dosha* and *Vikara* on any stage in human body can be diagnosed by examining the pulse. But now clinically it has limited examination of the pulse to its rate, rhythm and volume so they hardly come to concrete diagnosis. If radial pulse is clinically examined in the laboratory, it would be one of the wonderful and useful non-invasive diagnostic methods. Further, wavelet based techniques were used to decompose the pressure signal from the radial artery. Multi-resolution wavelet analysis was used to detect the percussion peaks and the P-P time series was obtained. Change is indeed the reality of nature. And now the old method if comes forward in a new form to the World, it would be far more useful to all human being.

DISCUSSION

Nadi Pariksha gives us an insight on how to optimize our health in accordance with the element which is predominant in our body. It also provides us with a personalized and individual prognosis which is detailed and accurate. The method of diagnosis must be accurate and correct. Briefly speaking, there are three aides to correct diagnosis. They are i). Instructions received from books and teachers (ii). Observations and (iii). Inferences. Amongst the several topics of examination in connection with the diagnosis of disease, the *Nadi- Pariksha* is of

great importance. In modern view *Nadi-Pariksha* indicates appraisal of cardiac function which is essential view of CVS biological function. The main point of this article I want to put here is awareness of *Nadi Pariksha*. I expect hereafter much research will take place in this diagnostic method and modern science helps for invasive test in lab on *Nadi Pariksha*.

CONCLUSION

Ayurvedic diagnostic technique of *Nadi-Pariksha* has always been a point of disputation. This diagnostic skill is based on a fine touchable sensitivity of the *Vaidya* to distinguish three types of *Dosha* respectably. *Acharya's* of *Yoga* mentioned in their text that *Nadi* is the channel of fresh '*Prana*' or '*Ki*' that is energy which is known as the very basis of bio-energy dynamics of body. *Nadi-Pariksha* is studied in modern basis as vascular physiology. The *Nadi Pariksha* is one of diagnostic methods in *Astha-sthana Pariksha* it helps in assessing the health status of the subject in terms of *Tri-Dosha*. The accuracy and exactness of diagnosing and representation of *Nadi-Pariksha* is dependent upon the subjective judgment. Hence, the outcome varies from physician to physician due to different skills in diagnostic tool. So, there is need to develop a scientific method to standardize the procedure of *Nadi Pariksha* diagnostic method.

Competing interests

The authors have declared that no competing interests exist.

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