A REVIEW OF NADI VIGYAN (THE PULSE SCIENCE)

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ABSTRACT

The nadi vigyan (pulse science) or sphygmology is a science through which the nature speaks to the physician by means of pulse. This branch of medical science has not been only considered as most useful and important, but also it has been only sure channel through which the exact state of the entire human system thoroughly known and realized the aid of the chief constituents of the body, the human viz. vata, pitta and kapha. Various factors are present outside and inside of the body which are responsible for variation of three humors. They are age, division of period during day and night, seasonal effect, diet etc. Nadi pariksha eases diagnosis and prognosis of the disease. According to Ayurveda no disease can be possible without involvement of dosha and the treatment is restablishment of dosha in their normal state. In current practice it is customary to examine nadi (pulse) in many system of medicine before embarking upon the treatment. Description of nadi priksha is not directly or indirectly available in any of the ayurvedic classics like Charak samhita, Kashyap samhita, Astang Samgraha, Astang Hridaya etc. Indian knowledge and references to nadi pariksha as means of diagnosis was not prevalent till the period of Sarangadhar samhita. The artery found at the root of thumb is evidence of life and we ascertain by feeling the movement of this artery. Then in 16th century ‘Bhavprakash’ by shri Bhav Mishrji also have proof of some development in the field of nadi pariksha. These developments included.

1. The relation between tridosha and fingers i.e. Index finger for Vata, Middle finger for Pitta and Ring finger for Kapha.
2. Nadi under healthy and unhealthy conditions.
3. Nadi in cases of vikruti.
4. Nadi under some psychiatric problems.
5. In male firstly right hand and then left hand pulse is examined. In females vice versa.

KEYWORDS: nadi, kala, pulse, nadi pariksha, nadi gati, dosha.

INTRODUCTION

The human body is composed of three fundamental elements called Dosha, Dhatu and Mala. The Dosha governs the physio-chemical and physiological activity of the body, while Dhatu enters into formation of the basic structure of the body, cells, there by performing some specific actions. The Malas are the substance which are partly utilized in the body and partly excreted in a modified form after performing their physiological function. These three elements are said to be in a dynamic equilibrium with each other for the maintenance of health. The term of nadi is found in abundance in various literature of the past but these nadies are mainly snayu. They are not arteries or dhamni or nadi which are used for exmanation. The characteristic features of the nadi is spundana or pulsation. Nadi as means of diagnosis was absent till as late as the thirteenth century. Sarangdhara flourished it in his work as a means of diagnosis and prognosis. It is considered that Egypt (1500 BC) had been the earliest country of the world which invented the knowledge of pulse only to know the physiological condition of heart. Arabic system of pulse-lore is totally based upon greek system of medicine so it is also known as greekoarabic system of medicine. Pulse examination is also prevalent in Chinese and Tibetan system of medicine.

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Vedas- The description of Nadi is available in “Atharvaveda” also clear differences between nadi, sira and dhamni are mentioned in Atharvaveda 1/36/1.

In Upnishad- 7 crores of Nadis are described in Upnishad and Kathopnishad.

In Tantras- in Shiva tantra Ida, Pingala and Sushumna Nadi are mentioned. All three Nadis give 3.5 lac branches.72 thousands Nadis are mentioned in Hathyoga pradipika.
In Samhitas- by reviewing ancient treaties written in ancient classics like Charaka, Shushruta, Ashtang samgraha etc about Nadi but reference of nadi is available in other terms.

In Charak Samhita Nadi pariksha is included in sparsh pariksha (palpation). Charak and Shushruta also used terms nadi in ligation of umbilical cord. So earlier classics of ayurveda like Charak, Shushruta, Vagbhata, Bhel Samhita etc., the authors have not mentioned this science.

The first indication about this science on original form is found in Sharangdhara Samhita. The pulse examination has been described in the third chapter of the first part of Sharangdhar Samhita. The whole chapter is comprising of description of pulse examination. It is described only in eight shlokas. First shlokas deals with anatomical position and significance of artery as a pulse. Rest with 15 types of pulses as.

(a) Pulses in certain physiological states of body.
(b) Pulses in mental state of the body.
(c) Pulses in certain pathological state of the body.

Anatomical Position of Nadi
The artery found at the root of the thumb is evidence of life and we ascertain this by feeling its movement. The pulse varies in character in different physiological state.
In normal state or health the pulse become steady and strong.
It the state of Diptagni/Kshudha (hungrers appetite) the pulse is light(laghu) to touch, chapals(tremendous) and fast after taking meal it becomes steady(sthira). In normal state of health pulses becomes steady and strong.

Effect of Dosha in movement of pulse

Vatik Pulse:- When there is excitement of Vata pulse resembles to the movement of serpent(Sarpa) and leech(Jalauka) i.e. it assumes curvilinear motion line them.

Paittik Pulse:- In case of vitiation of Pitta movement resembles to sparrow(kuling) crow(kaka) and frog(manduka) i.e. pulse becomes jumping like in nature.

Kaphaj Pulse:- When Kapha dosha is vitiated pulse resembles to swan(hansa) and pigeon(parawata) i.e. pulse moves slowly.

So it is clear that the Sharangdhar Samhita plays an important role in attempt to introduce the knowledge of pulse examination.
Bhava Prakash:- As for pulse examination is concerned it has been described in sixth Prakhand of Pratham khand under the heading of rogi pariksha. Twelve versus of shlokas emphasizes on

1) Specification of site for pulse examination in both male and female.
2) Indication of use of three fingers viz. index (tarjani), middle(madhya) and ring finger(anamika) for vata, pitta and kapha respectively.
3) Pulse in mental, physiological and pathological states of body. He used the terms as Sthira, Balwati Mandgati and vegwati etc. As regards the physiological condition the pulse of healthy person is strong and steady. In case of hunger it is stremulous[chapal] and after taking food it becomes stady[sthira].
4) So it is clear that the bhavamishra hasa
5) Added the knowledge of nadi by indicating site for pulse examination in mal and female,
   and use of three fingers for pulse examination.

Yogratnakar- Pulse examination as the means of diagnosis in the first chapter under the heading rogi pariksha.

Description of pulse in yogaratnakar is condensed within 48 verses thirty three varieties of pulse are of clinical importance. 18 varieties deal with the characteristic of pulse in physiological and other general pathological conditions.

Pulse Examination Method:- Physician should examine by his right hand, the pulse below the left thumb in case of female and below the right thumb in case of male.

MATHODOLOGY
First the elbow of the patient should be slightly flexed to the left and the wrist slightly bent to the left with the finger distended and dispersed. Physician after attaining concentration of mind should examine himself, the pulse repeatedly by giving and releasing the pressure alternate over it.

By this procedure we should decide the condition of Doshas in their respective places and the condition of pulse whether it is slow, medium or fast.
Pulse in Physiological condition
In person with good hunger pulse moves fast and light (vegwati and laghvi). After satisfactory diet pulse becomes sthira. In anxiety and fear feeble kshina. In lust and anger becomes fast (vegwati).

Pulse in general pathological condition
Vatika Pulse- It is felt at index finger, it moves like the movement of snake and leech.
Paittika pulse- It is felt at middle finger and it moves like crow and frog.
Kaphaja pulse- It moves like swan, pigeon and can be felt at ring finger.

Nadi Pariksha By Ravana
The whole treatise of Ravana ‘Nadi Pariksha’ is attribute to pulse examination. 96 verses are related with general description pulse related with certain diet physiological condition, mental states, diseases and prognosis are clearly mentioned.

In the verse fourth reference of Nadin, while description the anatomical position of pulse. Nadi exists at the root of thumb which is evidence of life and particularly it should be examined to know the condition of the body.

METHOD
The pulse lying one finger breadth below from the root of thumb. The artry at the root of thumb is evidence of life, should be examined carefully. By this physician can know the diseased condition of the body. In female pulse of left hand and left leg and in case of male pulse of right hand and right leg should be examined. Supporting with his left hand to the patients hand, the physician should press the artry lightly with his three fingers and examine. The vata dosha is detected under index finger, pitta and kapha under middle and ring finger respectively.

Nadi vigyan by Kanada: Kanada has described about general consideration of origin, examination, characterstics of pulse in physiological condition, mental states, different kinds of force stuff. Pulse as a prodromal symptom, prognosis either good or bad, diseased conditions.

According to this in entire body there are 35 millions of blood tubes or nadi’s thick and thin in nature lying in the body. They are tied in the region of naval as a centre (Nabhi Pradesh) and spread in all direction. Approximately 72,000 are thick tubes or principal veins. By the help
of these our perception of five sense organ is gained. They are thus called superior blood tubes or veins. Of these 700 veins 24 in number are more prominent than the root out of then nadi or pulse which passes through the left hand and right leg is said to be capable of examination.

Method: Examination of pulse is done by the physician by putting the three fingers of his right hand at the root of thumb. The vatic pulse is felt at proximal end i.e. under the index finger. Pitta and kapha is felt in the middle and the ring finger respectively.

Pulse in general physiological condition.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
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<tbody>
<tr>
<td>Health pulse</td>
<td>steady (sthir)</td>
</tr>
<tr>
<td>Good hunger</td>
<td>light and fast (laghavi and veghwati)</td>
</tr>
<tr>
<td>Appetite</td>
<td>tremulous</td>
</tr>
<tr>
<td>In morning</td>
<td>smooth (snigdha)</td>
</tr>
<tr>
<td>In noon</td>
<td>hot</td>
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<tr>
<td>In evening</td>
<td>fast</td>
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Sphygmology – it is the science through which nature speaks to the physician by means of pulse. This is the only sure channel through which the exact state of entire human system thoroughly known and realized by the aid of chief constituents of the body, the humors viz, Vata, Pitta and Nadi gives information about doshik state of human body, doshik vitiation. It is also useful in diagnosis and prognosis.

**DISCUSSION AND CONCLUSIONS**

Nadi (pulse) gives information of Doshik state of human body knowledge of Doshik variation and nadi pariksha case the diagnosis and prognosis because according to Ayurveda no diseases in the human body is possible without involvement of Dosha and the treatment is the re-established of Dosha in their normal state but description of nadi priksha is not directly or indirectly available in any of the extent Ayurvedic classics like Charak samhita Kashyap samhita, Astang samgraha Astang hridaya etc. references to nadi pariksha is available only in some recent works of Sharangadhar samhita. Yogaratnakar and Bhavapraksha separate treatise on pulse or nadi pariksha is also available as nadi pariksha by Ravana, nadi vigyan of Kanada, nadi gyan Darpan written by bhudhar and vasvarajiyam written by vasvaraj.
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