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Concept of Nabhi - A Review Study

Kishor G. Satani,¹ Hemang U. Raghavani,² Kunjal H. Bhatt³

¹Associate Professor, Dept of Samhita and Siddhanta, ²Assistant professor, Dept of Panchakarma, ³Assistant Professor, Dept of Shalakya Tantra, J. S. Ayurveda College, Nadiad, Gujarat, India.

ABSTRACT

The central point of body in between *Amashaya* (location of undigested food) and *Pakvashaya* (location of digested food) is termed as *Nabhi*. In classical texts of Ayurveda; scattered references regarding *Nabhi* are available like *Nabhi* is mentioned as a vital spot (*Marma*) of body. *Nabhi* is also included among the fifteen *Koshthangas* of body. In *Sharirasthana* of *Sushruta Samhita; Acharya Sushruta* mentioned that *Sira* and *Dhamani* are originated from *Nabhi*. *Acharya Vagbhatta* has quoted *Nabhi* as a dominant place of *Pitta Dosha*. *Nabhi* is an abode of *Pranas* (vital energy). Available literature and commentary on *Nabhi* interprets it as a Navel but practically it doesn't make a sense to stick with this interpretation. Therefore; it is need to review classical texts of Ayurveda and contemporary literature to get clear and unambiguous meaning of the word "*Nabhi*" now a day. After thoroughly reading and interpreting the literature available regarding *Nabhi*; core of physiological process would be considered by the term *Nabhi*.

Key words: Nabhi, Marma, Kosthanga.

INTRODUCTION

Ayurveda; science of life has focused firstly on preventive aspect rather than curative one in compare to other systems of medicine. Through the aims and objectives of Ayurveda; one can perceive its holistic approach in service to any living being. In spite of having oldest stream of living being and medicine; Ayurveda doesn't get its original identity in compare to other systems of healthcare available now a day. So many causes may be there but one of the leading cause for that knowingly or unknowingly scholars and experts of Ayurveda under the influence of modern systems of medicine always interpret or correlate the terms of Ayurveda with modern terms. Unless a

Address for correspondence:

Dr. Kishor G. Satani

Associate Professor, Dept of Samhita and Siddhanta, J. S. Ayurveda College, Nadiad, Gujarat, India.

E-mail: kishorsatani@gmail.com

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person would not have complete knowledge of that term he cannot become able to interpret the term accordingly just like 'Nabhi'.

By the word 'Nabhi' in Ayurveda; a central part of body or Navel is being translated or interpreted.^[1] Scattered references available in classical texts of Ayurveda about Nabhi do not fit with this interpretation. For an example; Acharya Sushruta has included Nabhi among fifteen types of Koshthangas.^[2] As per the etymology of Koshtha available in Amarakosha; Koshtha is a gate between two media where transformation process continues to maintain the homeostasis of body.^[3] E.g. In Yakrit, Pliha, Amashaya, Vrikka etc. fifteen Koshthangas almost all types of raw materials are converted in to final product diurnally. Hence, Navel which is made from dense fibrous tissue doesn't fit with Koshthanga 'Nabhi' at this place.

In *Sushruta Samhita*; *Nabhi* is highlighted as origin place of *Sira*^[4] and *Dhamani*.^[5] On dissecting the Navel of any person we couldn't find as such vessels at that place. Anatomical description of *Nabhi* mentioned by *Acharya* Sushruta in Sharirasthana reveals *Nabhi* as a center for reticulation similar to that of the spokes of a wheel.^[6] Again here; Navel somehow mismatches with the correlation made for *Nabhi*.

All the above references force us to draw out the perfect, clear and unambiguous meaning of the word "Nabhi". To get the knowledge of different aspect of any word one should start with etymology, definition, contemporary views, applicability of different aspect related to the word.

Etymology of Nabhi

The term is derived from words 'Nah - Bandhe'.^[7] It means to bind or tie to the central point just like the spokes of wheel held at the nave.

Definition

A binding or connecting media of scattredly available structural parts of body is known as *Nabhi*.^[8]

Location of *Nabhi* is mentioned in between *Amashaya* (substratum for undigested food) and *Pakvashaya* (substratum for digested food). [9]

MATERIALS AND METHODS

The present study depends on the data collected from the classical texts of Ayurveda and modern books, national and international journals, magazines, conferences, internet materials, critically evaluated and important information will be sought to approach the objectives scientifically.

DISCUSSION

Due to blind persuasion of methodology of modern system of healthcare to interpret any word or concept of Ayurveda; suitable and clear meaning of most of the fundamental principles or technical terms had not been perceived by the scholars of Ayurveda. Hence; not only new comers but scholars of Ayurveda had suffered with many hurdles to get the exact and complete aspect of any terms of Ayurveda since few centuries.

A scattered description about *Nabhi* is available in Ayurvedic literature but due to lack of correlative interpretation and applied aspect of *Nabhi* with latest up to date modern parameters; Ayurvedists do not have confirmative knowledge and applicability of concept of *Nabhi*. The advancing age of information technology demands the classical ancient Ayurveda to

be communicated as well as interpreted in term of existing knowledge for international debate. An effort has been made by author to touch the overall aspect of *Nabhi* through variable references of classical texts of Ayurveda.

Anatomical point of view

Nabhi as a Navel

Nabhi is taken as a center of gravitational force in the body. During the pregnancy period the foetal movement occurs through this center. Generally; Nabhi is considered as a superficial regional landmark to describe the sites of various organs like *Grahani* is situated on *Nabhi*, *Pakvashaya* at lower side of it.^[10] Amashaya is situated in between *Nabhi* and Stana.^[11]

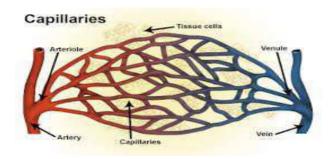
Nabhi is made of dense fibrous tissue. Its position is variable. In healthy adults, it lays in anterior median line at the level of disc between L₃ and L₄ vertebrae. It is lower in infants and in persons with pendulous abdomen. Nabhi is lying midway between the suprasternal notch and symphysis pubis.^[12]

A cord which is attached with navel of baby and on other side with placenta of mother is known as Umbilical cord (*Nabhinadi*). Hence; *Nabhi* is avowed as the *Dharani* i.e foundation, truly umbilicus is the base of your body and during foetal life it is the support of survival for foetus. Regarding the describing the signs indicating the elongated life of baby; *Acharya* Charaka mentioned that the baby having right curved Navel would get elongated life.^[13]

Nabhi has relevance as a vital spot (Marma) and According to the classical descriptions it is not clear that the 4 angula size of Nabhi Marma is in terms of length, breadth or depth. As observed in the cadaveric dissection, the 4 Angula circumference and depth around the umbilicus have more relevance. [14]

Leonardo's illustration of the theory of Vitruvius is a pen ink drawing of a male figure whose outstretched limbs touch the circumference of a circle and the edge of a square. The navel is the centre of the circle in this drawing of the Vitruvian Man by Leonardo da Vinci. [15]

Nabhi as a center of arterioles and venules - capillary



According to *Acharya* Sushruta; *Nabhi* is the site of origin of both *Dhamani* and *Sira*. There are 700 *Sira*^[16] and 24 *Dhamani*^[17] are there in our body. They originate from the *Nabhi* and moves in the three directions - i.e. upwards, downwards and transverse. In cadaveric dissection of umbilicus there are not any such types of vessels available at that place. So, as per the description of above mentioned stanzas through *Nabhi* one can assume a media which connects both the vessels i.e. *Sira* and *Dhamani*. In early stage of pregnancy at the reticular structures of venules and arterioles are been connected by capillaries which seems more appropriate with the examples narrated by *Acharya Sushruta*.

Capillaries are the smallest type of blood vessel in the body. They are only one cell thick and their job is to enable the exchange of oxygen and other nutrients between the blood and surrounding tissues; they also collect carbon dioxide waste materials and fluids for return to the veins. They connect the tiny muscular branches of arteries, called arterioles, with tiny veins. Ultimately, the capillary is the site of internal or cellular respiration and is responsible for the utilization of oxygen by the tissue and the transporting of carbon dioxide as waste to the veins for elimination by the lungs. The arterial blood system branches extensively to deliver blood to over a billion capillaries in the body. One place where they can be easily seen from the outside is on the whites of the eyes. [18] Capillaries are found in every square inch of the body, from the skin to the deepest tissues in the body's cavities. There are between 60,000 to 100,000 miles of blood vessels stretching throughout the human body, depending on the size and weight of the person, and most of these are capillaries.

In Charaka Samhita; *Nabhi* is included among the fifteen types of *Kosthangas*. As per the discussion made at introductory portion *Koshtha* is one type of media or door to transform the foreign body in to material homologous to body. Navel or umbilicus doesn't perform such types of activity but capillaries can do as they are supplying the oxygenated blood to the respective cells as well as they are collecting the deoxygenated blood and pass it to venules. During this procedure the supplying and collecting materials are converted in the finished materials through the energy available in capillaries. [19] That is the reason for mentioning the *Nabhi* as a dominant place of *Pitta* in Ashtang Hridaya Sutrasthana. [20]

Twelve types of *Prana* (Vital energy) of an oraganism are located at *Nabhi* as per the reference of *Sushruta Sharirastana* seventh chapter.^[21]

Being as one of the *Sira Marma* any kinds of injury over *Nabhi* may lead to sudden death of the person. By accepting *Nabhi* as cappilaries it can easily be understood that *Rakta* is mentioned as one of the *Pranas* and bleeding from plexus of an organism may lead to hamper the functional integrity of different mechanism of an organism.

Anatomical description of *Nabhi* as mentioned in this stanza also resembles with capillaries of body. *Nabhi* having the center for reticulation like spokes of a wheel become center for the radiating venules and arterioules.

Physiological point of view

Nabhi being as a center of Agni; or a dominant place of Pitta with the help of Samana Vayu located at Nabhi perform the process of digestion through Grahana (consumption / selection), Pachana (conversion), Vivechana (separation) and Munchana (give up for next stage). [22]

Acharya Sharangdhara has narrated beautifully the normal physiology of respiration but by accepting Nabhi as umbilicus it seems difficult to get the practical applicability of the procedure mentioned in it. Nabhistha Prana means deoxygenated blood available in capillaries; converted into oxygenated

blood after connecting through *Hrat Kamalantaram* means lungs.^[23]

Same way; mode of action of *Basti* described in the definition of *Basti* would be understood by *Vaidya* by accepting *Nabhi* as capillaries. By entering and oiling into central part, surrounding part and lateral part of *Kukshi*; *Basti* expels out the vitiated *Doshas* and *Malas* outside the body. [24] Capillaries available at small and large intestines absorb the medicated oil or decoction on administration of *Basti* and that is the reason behind the efficacy of *Basti* is observed on all over the body.

Pathological point of view

Samana Vayu is located at Svedavahi (Mala carrier), Doshavahi (bio-energies carrier) and Ambuvahi (nutrient carrier) Srotas which are mainly related with the process of digestion carried out in all over body. In Udararoga; due to obstruction of above Srotas which are mainly dealt with capillaries Vata Dosha provokes and it vitiates Agni; hence, Agni situated in capillaries cannot perform it's Grahana, Pachana, Vivechana and Munchana Karma properly and that is the reason to increase the permeability of capillaries and exudation of fluid from them. [26]

In Jatodak Avastha of Jalodara (ascites) accumulation of fluid in peritoneum occurs due to the Parivritta Nabhi. [27] Parivritta Nabhi indicates the angiogenesis of capillaries or due to increasing the permeability of capillaries oozing of free fluid from them. In Sotha (oedema) also involvement of Nabhi can be assume due to increasing the permeability of capillaries intra cellular fluid oozes from them.

Vak Pravritti, Prayatna, Urja, Bala and Varna etc. Karmas are mainly related with the conversation of potential energy in to kinetic energy through capillaries which is carried out by Udana Vayu with the help of Koshtha. [28] Hence, Nabhi is indicated as one of the places of Udana Vayu.

CONCLUSION

To get the appropriate meaning of any word of stanza one should not stick to any single interpretation but *Shabdartha*, *Gudhartha* and *Bhavartha* should be

accepted as per context of that particular Stanza. As per the discussion made over indicates that *Nabhi* as a navel only doesn't reflect its overall aspect but one should also accept reticular bed formed by capillaries as a *Nabhi*. More over *Bhavartha* of the word '*Nabhi*' as a center part of any physiological process seems more authentic aspect of it as per the description made by authors of classical texts of Ayurveda. In nutshell; three types of meaning of the word *Nabhi* alike; *Shabdartha* - *Nabhi* as a Navel, *Gudhartha* - *Nabhi* as Capillaries, *Bhavartha* - *Nabhi* as core of any physiological process.

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