RECENT RESEARCH ADVANCES IN RACHANA SHARIR ON THE CONCEPT OF NABHI AND ITS RELATION WITH MODERN ANATOMY

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ABSTRACT

Ayurveda is an elaborate and detailed science; it offers deep insight into the significance of each body part. Together with other structures, Nabhi is one of the most crucial components. At the very beginning of life, even at the embryonic level, the Nabhi performs the most significant function in the development of the body. According to Ayurveda, the origin of the Siras that exist between Pakvashaya and Amashaya is Nabhi. These Siras act as channels for nutrition and as showers of nourishment in various areas of our bodies. Nabhi is an important structure in the body and the center of all of the body's organs, according to various Ayurvedic Acharyas. Nonetheless, it is regarded as Kosthanga, Marma, Sira, Dhamani and Prabhava Sthana, among many other names. It is a site of various treatments which makes it worth considering its anatomical concepts and applied aspects. According to both contemporary studies and Nabhi's literary analysis, it is interpreted as the umbilicus but practically it does not make sense to stick with this interpretation. The object of the present study is to trace the most significant and valuable hidden treasure of Rachana Sharir and its relation to modern anatomy. In this, a paper attempt has been made to connect references about Nabhi from Rachana Sharir, the concept of Nabhi has been connected to modern anatomy through logical analysis of these references.

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Keywords: Ayurveda, Nabhi, Marma, Kosthanga, Umbilicus

1. INTRODUCTION

To show the importance of the study of Rachana Sharir, Acharya Sushruta has highly quoted that no one can become a good physician without having proper theoretical and practical knowledge of the anatomy of the human body (Rachana Sharir). So, to become good physician the knowledge of Rachana Sharir is very important to accomplish the successful Chikitsa. A morphological feature of the anatomy is identified and after identification, it is used as a reference point for other
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body organs and that is termed as anatomical landmarks [Anatomic Landmark. (n.d.]
These anatomical landmarks mainly identify specific structures or positions. In Ayurveda, Nabhi Sharir is one such unexplored anatomical landmark which is widely used. In Classical text, many references are available regarding Nabhi Sharir which is available in scattered form. Nabhi is Agni Sthana or Jyoti Sthana. This is where Samana Vayu (the Prana or life force energy that supports digestion, formation, and elimination of urine) and Pachak Pitta (digester fire) reside. In contrast to other medical sciences Ayurveda, the science of life, has prioritised the preventive aspect of health first before turning to the therapeutic one. Sharir's information is dispersed throughout the Samhitas and cannot be found in discrete forms like current anatomy. These factors naturally inspire interest in learning more about Nabhi and connecting it to contemporary anatomy. In Ayurveda, the word "Nabhi" refers to the navel, which is the centre of the body. Trikamji (2010) Nabhi is a body part that is precious and ought to be handled with care. The apana vata, which is in charge of downward elimination, has its seat there. It is an indication of how the digestive system is doing. It should be massaged often to encourage health and strength because it is a source of prana. Ayurvedic medicine assigns symbolic value to the navel in addition to its physiological relevance. It is interpreted as a picture of the relationship that exists between the self and the cosmos. Similar to how the navel connects a fetus to its mother, it also serves as a point of connection between each human soul and cosmic energy.

1.1. NABHI SHARIR EXPLAINED IN CLASSICAL TEXTS
The positional and directional landmarks related to the Nabhi

- Location of Amashaya In between Nabhi and Stana Pradesh.
- The position of Grahanis is just above the Nabhi
- Location of Pakwashaya below the Nabhi and above the Shroni and Guda
- Agnyashaya is located above and to the left side of Nabhi.
- Basti is situated in the midst of Nabhi, Prishtha, Kati, Mushka, Guda, Vankshanand Shephasa


1.2. NABHI AS MARMA
Nabhi Marma is one among 107 Marma explained by Acharya Charaka. Injury to this leads to immediate death or death within 7 days. Trikamji (2017) This Marma is one's own palm size in area 4 Angula. Trikamji (2017) Structurally, it is a sira marma Srikanta Murthy & Khanda (1984). The vascular structures falling under the umbilical region are the abdominal aorta, inferior vena cava, superior mesenteric artery with branches, and Anastomosis between the superior epigastric and inferior epigastric artery. They are structurally and clinically vulnerable.

The scattered references to Nabhi that can be found in classical Ayurvedic writings do not support any interpretation. The Sushruta Samhita highlights Nabhi as Sira's and Dhamani's origin. In that location, we were unable to locate any such vessels. Nabhi is anatomically described by Acharya Sushruta in Sharirasthana as a
center for reticulation like the spokes of a wheel. Likewise, the correlation between Nabhi and Navel doesn't seem to fit. So, we need to determine the word "Nabhi’s" ideal, distinct, and clear meaning. The study should begin by learning the word’s etymology, definition, current usage, and the extent to which various aspects of the word are applicable.

- **Etymology:**
  Origin of Nabhi

  The word “Nah-Bandhe” is the source of the phrase. Amarsinh & Shashtri (2012) In the same way as a wheel's spokes are kept at the nave, it signifies to bind or tie to the center.

- **Definition:**
  Nabhi is a medium that binds or connects various available body structural components. Shabdakalpadrum et al. (2002) Between Amashaya (the substrate for undigested food) and Pakvashaya (the substratum for digested food) is where Nabhi is located. Trikamji (2010)

### 2. MATERIALS AND METHODS

The current study is based on data gathered from both classical texts of Ayurveda and modern books, national and international journals, magazines, conferences, and online resources. Important information will be sought in order to approach the study's aims scientifically.

### 3. DISCUSSION

The majority of the key principles or technical terminology was not understood by Ayurveda scholars due to the methodology of the current healthcare system’s blind persuasion to interpret any word or concept of Ayurveda. So, for many centuries, not only newcomers but also scholars of Ayurveda struggled to understand the precise and comprehensive nature of any terms used in science. Ayurvedic literature contains a sporadic description of Nabhi but owing to a lack of correlative interpretation and application of Nabhi with the most recent modern parameters, Ayurvedists lack confirmatory knowledge and the ability to apply the notion of Nabhi. The classical ancient system of Ayurveda must be presented and understood in terms of current knowledge for international debate in the age of digital technology. In this paper, we have tried to touch on Nabhi's entire aspect through a variety of allusions to old Ayurvedic writings. The navel is a fascinating part of the body, with a rich history and symbolism in both Ayurveda and modern medicine. While their perspectives differ, both traditions recognize its importance for maintaining health. By understanding the navel's role in both systems, we can appreciate the interconnectedness of body, mind, and spirit.

<table>
<thead>
<tr>
<th>Nabhi Relation to a Modern Anatomy</th>
<th>Ayurveda</th>
<th>Modern Anatomy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>Central point of the abdomen, where the umbilical cord once attached</td>
<td>Mark on the abdomen where the umbilical cord was attached.</td>
</tr>
<tr>
<td><strong>Importance</strong></td>
<td>Considered the center of the body, vital for energy flow and physical and emotional well-being</td>
<td>Interconnects the digestive system to the circulatory system</td>
</tr>
<tr>
<td><strong>Ayurvedic functions</strong></td>
<td>Absorption of nutrients, transportation of life force</td>
<td>No direct physiological functions</td>
</tr>
</tbody>
</table>
Nabhi as a Navel

Nabhi is regarded as the body’s gravitational centre. The movement of the foetus throughout pregnancy happens through this centre. Grahani is located on Nabhi, while Pakvashaya is on its lower side Srikanta Murthy & Khanda (1984). These locations of various organs are generally described using Nabhi as a superficial regional landmark. Amashaya is located between Nabhi and Stana. Trikamji (2008) Throughout antiquity, nabhi has been associated with youth and beauty. The Nabhi's appearance conveys the essence of the individual. During the fetal stage, Nabhi Nadi plays a crucial role in the development of the fetus and the Garbhaposhana. All of the nutrients are transferred between the mother and the fetus through this Nabhi-Nadi. It clarifies the meaning of Garbha Matru Paratantrata and Garbha Poshana. The fetus grows and develops through the Garbha Nabhi Nadi, which acts as a channel for the additional Rasas that are created within the mother's body. Primarily significant in anatomy, physiology, pathology, embryology, and medicine, particularly in Ayurveda, are Nabhi and Nabhi Nadi Sharma et al. (2021).

**Figure 1**

![Figure 1 Garbha Nabhi Nadi](https://neurocyte.in/umbilical-cord/)
Dense fibrous tissue makes up Nabhi. It moves around in space. It is located on the anterior median line between the L3 and L4 vertebrae in healthy people, infants and people with pendulous abdomens have lower levels. Nabhi is positioned between xiphoid process and pubic symphysis. Thomas & Kulkarni (2014) The umbilical cord is a cord that connects the fetus's navel to the mother's placenta on the opposite side (Nabhinadi). As a result, Nabhi is referred to as the Dharani or foundation. In truth, the umbilicus serves as both the basis of the body and the means by which the fetus survives while in the womb. Acharya Charaka stated that a fetus with a right-curve Navel will have an elongated life while describing the indicators suggesting the elongated life of a foetus. Trikamji (2008) According to the traditional descriptions, it is unclear if Nabhi's significance as a vital spot (Marma) refers to its length, breadth, or depth. The 4 Angula circumference and depth around the umbilicus have increased significance, as seen in the cadaveric dissection. Trikamji (2010)

- Nabhi as a center of arterioles and venules - capillary

According to Acharya Sushruta, Dhamani and Sira, both originated in Nabhi. In our body, there are 700 Sira Trikamji (2010) and 24 Dhamani. Trikamji (2010) They move in three directions—upward, downward, and transverse- and originate from the Nabhi. Those types of vessels are not present in the umbilicus during cadaveric dissection. Hence, based on the description of the aforementioned stanzas through Nabhi, it is reasonable to believe that this is the medium that joins the two boats, Sira and Dhamani. Capillaries connect the reticular structures of venules and arterioles in the early stages of pregnancy, which fits better with the instances given by Acharya Sushruta. The narrowest blood vessel in the body is called a capillary. They are barely one cell thick, and their function is to allow the blood and surrounding tissues to exchange oxygen and other nutrients. They also gather carbon dioxide waste products and fluids for return to the veins. Nabhi is included among the fifteen different varieties of Kosthangas in the Charaka Samhita. One type of medium or gateway to convert a foreign body into biologically compatible material is the Koshtha. The navel or umbilicus does not carry out these types of functions, but capillaries can, since they deliver oxygen-rich blood to the appropriate cells and collect deoxygenated blood before passing it to venules.
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Through the use of capillary energy, the providing and collecting materials are transformed into the end products during this process. Blood Capillaries (2017) For this reason, Ashtanga Hridaya Sutrasthana refers to the Nabhi as a Pitta-dominant location. Trikamji (2008) According to the seventh chapter of Sushruta Sharirasthana, Nabhi is home to twelve different varieties of an organism’s prana (vital energy). Paradkar (2000) Any type of injury to Nabhi, one of the Sira Marma, could cause the individual to die suddenly. Accepting Nabhi as capillaries makes it simple to understand why Rakta is stated as one of the Pranas and bleeding from an organism’s plexus might interfere with the functionality of many mechanisms.

4. PHYSIOLOGICAL POINT OF VIEW

Nabhi being a center of Agni; or a dominant place of Pitta with the help of Samana Vayu located at Nabhi performs the process of digestion through Grahana (consumption/selection), Pachana (conversion), Vivechana (separation) and Munchana (give up for coming stage). Paradkar (2000) Acharya Sharangdhara has described beautifully the normal physiology of respiration but by accepting Nabhi as umbilicus it seems delicate to get the practical connection 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. SriKanta Murthy & Khanda (1984) Same way; the mode of action of Basti described in the description of Basti would be understood by Vaidya by accepting Nabhi as capillaries. By entering and slicking into the central part, enclosing part and side part of Kukshi; Basti expels out the vitiated Doshas and Malas outside the body. Trikamji (2008) Capillaries available at small and large bowel absorb the treated oil painting or decoction on administration of Basti and that’s the reason behind the efficacy of Basti is observed each over the body.

5. PATHOLOGICAL POINT OF VIEW

Samana Vayu is located at Svedavahi (Mala carrier), Doshavahi (bio-energies carrier) and Ambuvahi (nutrient carrier) Srotas which are substantially related with the process of digestion carried out in all over body. Trikamji (2008) In Udararoga; due to inhibition of the below Srotas which chiefly dealt with capillaries Vata Dosha provokes and vitiates Agni; hence, Agni positioned in capillaries cannot perform its Grahana, Pachana, Vivechana and Munchana Karma correctly and that’s the reason to increase the permeability of capillaries and exudation of fluid from them. Trikamji (2008) in Jatodak Avastha of Jalodara (ascites) accumulation of fluid in the peritoneum occurs due to the Parivritta Nabhi. Trikamji (2010) Parivratta Nabhi indicates the angiogenesis of capillaries or due to adding the permeability of capillaries oozing free fluid from them. In Sotha(oedema) also involvement of Nabhi can be assumed due to adding the permeability of capillariesintra-cellular fluid oozes from them. Vak, Urja, Prayatna, Bala and Varna. Karmas are substantially related to the conversion of implicit energy into kinetic energy through capillaries which is carried out by Udana Vayu with the help of Koshtha. Trikamji (2008) Hence, Nabhi is indicated as one of the places of Udana Vayu.

6. RESULTS

When interpreting any word, one must consider its Shabdartha, Gudhartha, and Bhavartha within the context of that stanza. Shabdartha means the literal meaning of a word, Bhavarth means the figurative and contextual meaning, and Gudharth refers to a word’s deeper and philosophical meaning. The reticular bed formed by
capillaries should also be recognized as a Nabhi, as the navel alone does not adequately depict a Nabhi. Additionally, the Bhavartha of the term "Nabhi" as the centre of any physiological activity appears to be the more authentic part of it, based on the descriptions given by the writers of the traditional Ayurvedic literature. In summary, there are three related meanings associated with the word "Nabhi": in Shabdartha, it refers to a navel; in Gudhartha, it refers to capillaries; and in Bhavartha, it refers to the centre of all physiological functions.

CONFLICT OF INTERESTS
None.

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REFERENCES