AN ANATOMICAL EXPLORATION OF THE SITE OF VEDHYA SIRA IN APACHI AS DESCRIBED BY ACHARYA SUSHRUTA

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ABSTRACT

In Ayurveda text there is an immense description of Sharir, out of which Sira Sharir is one. Our Acharya has described the Sira in ancient literature. In that order Acharya Sushruta has described the Sira in Sharir Sthana chapter – 7 and 8. The Sushruta Samhita is one of the three great treatises (Brahattrayi) of Ayurveda representing mainly the school of surgery. The Sharir Sthana of Sushruta Samhita is considered best among all others. Sushruta was the pioneer who described the method of dissection of human cadaver & emphasized on the importance of dissection in study of anatomy. Siravedhana has been one of the most effectively used procedures among various methods described in Indian classical surgery. The school of Sushruta applied this technique therapeutically as well as prophylactically. Just as a properly and well administered Basti chikitsa is considered as half the treatment in internal medicine, similarly Siravedhana covers half of the treatment in surgery. In this advance era of modern science this procedure is relatively simple to carry out. There are many sites of Siravedhna described in the Samhita but its practical application now a day is very limited. Thus, the references in the Samhita need to be further explore for its practical applicability. A scientific study is thus needed to know the exact anatomical site and name of the particular Sira to perform Siravedhna.

Key word- Siravedhna, Apachi, Indrabasti Marma
INTRODUCTION

Charaka Samhita

Charaka added few new things to make the understanding clear about the vascular system. He was the first person to give the definitions of Sira, Dhamani and Srotas in Sutra Sthana 30th chapter.

In his opinion Sira, Dhamani and Srotas are different structures. He said that Dhamani pulsates and Sira do not. He envisages that where the Sarana (flow) function is achieved the structure is known as Sira.

Sushruta Samhita:

It was found so many references regarding Sira in different parts of Sushruta Samhita. But in Sharir Sthana he was described completely about Sira in 7th chapter ‘Sira Varna Vibhaktikaran Shariram’ and 8th Chapter ‘Sira Vyadha Vidhi Shariram’ Beside these two chapters in 9th Chapter ‘Dhamni Shariram Vyakarnam’ he was differentiating Sira, Dhamani and Srotas.

Moola Sthana of Sira:

1. Sushruta has stated that Sira originate from Nabhi and they spread upward, downward and in oblique fashion from Nabhi. Pranas of the living beings stay in Nabhi. Nabhi is surrounded by Sira in the same way as the nave of the wheel is surrounded by spokes.
2. According to Vagbhatta the origin of Sira starts from Hridaya itself.
3. According to Charaka - Ten Dhamani are starting from Hridaya.

Sira Sankhya

Total numbers of the Sira are 700. The Moola (Root) Sira are 40. These classified into 4 types on the basis of carrying Vata, Pitta, Kapha and Raktu.

Sadanga Anusaar Sira Sankhya Vibhajan:

According to Sushruta body is divided into six major parts. These are Urddha Shakha (Upper limbs), Adha Shakha (Lower limbs) Madhyashair (Trunk) and Urddhwajatra (head and neck).

The number of Sira related to these six parts following way.

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1 धान्यः धान्यः श्रवणात् सौतान्त्रित सरणात्तिसिरा। (च.श. 30/12)
2 तत्स हस्तिंशृत्वा तथं परस्परवर्यं प्रस्थित्वेत च धातुतेः प्रस्थित्रसिरा। कार्यं संभवन्ति शरीरिणाम। (सु.श. 7/3)
3 तत्त्वमा संस्कारमात्रः: प्रकाशितं (वर्तन्ते परा)। समस्तात्: || (सु.श. 7/4).
4 नाति: स्त्राणा: प्राणणा: प्राणणात्तृत्वपुष्पाः। सुसिराम्बुलानामिकनामकियारके: || (सु.श. 7/5).
5 चतुर्धशंसिः हत्वातः: सर्वं सर्वते तु। (सु.श. 3/18,19)
6 अर्थं दशमहामूलाः। महासक्तं महासक्ता। महत च अर्थं। च हत्वं पर्याप्तयं युद्धेऽ ते॥ (च.श. 30/1)
7 तत्त्वं मूलसर्पमथवर्यंति तत्स वातावहिन्यो दशं। पितावहिन्यो दशं। कफवहिन्यो दशं। (सु.श. 7/6).
8 तथा धातुसिरास्पदध्विरुति: तत्स वातावहिन्यो दशं। पितावहिन्यो दशं। कफवहिन्यो दशं। (सु.श. 5/4).
9 सुसिराम्बुलाः सत्यवाचकस्तुशुद्धगामिन्यविष्कारां शर्ते कोणे च च। य मूर्विकाः || (सु.श. 7/20)
- Number of Sira in Urdhwa Shakha-200
- Number of Sira in Adha Shakha-200
- Number of Sira in Madhyasharir-136
- Number of Sira in Urdhwajatru-164

**Avedhya Sira:**

Those Sira in the body which the physician should not puncture is called Avedhya Sira. These Sira are prohibited for puncture. Sushruta has described Avedhya Sira first time in history of medicine and surgery. Sushruta said that the physician or surgeon should not perform puncture because it would definitely cause disability or death. Sushruta and Vagbhatta considered among seven hundred Sira only 98 Sira should not be punctured. Remaining can be choosing for venepuncture in certain diseases. Division of 98 Avedhya Sira are 16 in Sakha, 32 in Kostha and 50 in Jatru

**Siravyadha-Vidhi:**

The methodology of Siravedhana is described by Acharya Sushruta in Sharir Sthana chapter 8 "Siravyadha Vidhi Sharir". Sushruta has elucidated the importance of Siravedhana as a major part of Shalya Tantra i.e., surgery it shows that Siravedhana was very effective and popular treatment modality at that time and was used in many of the diseases with tremendous results.

**Apachi**

Increased Medas (fat tissue) together with Kapha, gives rise to tumour in the region where the bone of the lower jaw (mandible), axilla, clavicle, shoulder joint, nape of the neck and throat (front of the neck) joins with the body. The tumour is static (immovable) round or broad, unctuous and has mild pain; such tumours of the size of Amalaka seed, spread like the shoal of the fish eggs, having the same colour as that of the body and growing steadily, is called as Apachi because of its slow and steady growth. These have itching and mild pain, disappear when pricked and appear at another site; this disease produced by Meda and Kapha is difficult to cure and persist for many years.

**Samprapti:**

Kapha and Meda are accumulated in Hanvasthi, Akshakasthi, Bahu, Jangha, and Manya producing Granthi. They are stiff, round, circular, less painful resembling seed of Amalaki and Matsyanda Jala.

**Dosha involved:**

Dosha: Kapha Pradhan Tirdosha

Dushya: Meda
**Site of Siravedhana:** Two Angula (4 cm) below the Indrabasti Marma

**DISCUSSION:**

The surgical procedure of puncturing the Sira for therapeutic purposes and accomplishing the Raktamokshana is referred by the name Siravedhana.

The term Siravedhana comprises of two words Sira and Vyadh/Vedhana.

*Vedhana* is a type of Punctured wound and it should be performed by sharp pointed instruments.\(^{13}\)

*Acharya Sushruta* has counted *Vedhana karma* in *Ashtavidha Shastra Karma* (surgical wounds.) Siravedhana is a one of the methods for Raktamokshana.\(^ {14}\)

The surgical procedure of puncturing the Sira for therapeutic purposes and accomplishing the Raktamokshana is referred by the name Siravedhana. *Vedhana* is a type of puncturing procedure and it should be performed by sharp pointed 102 instruments. For this surgical process, Vessels other than pulsating ones (artery) can be compared to vein. As *Raktavisravan* is done from the surface of the body so the superficial *Sira* (Vein) is preferred. Out of all veins, superficial veins are highly variable from person to person. So, the suitable veins for Siravedhana differ accordingly. The site of Siravedhana cannot be generalized.

*Acharya* has been described the Avedhya Sira and also explained their complications so that they should not be used for puncture as they may lead to death. Though *Acharya* has mentioned 98 Avedhya Sira in the body, the veins (*Sira*) those fulfil above criteria should not be used for Siravedhana Karma.

In this study, it is discussed about *Shadanga sharir* which is one of the fundamental concepts of *Ayurveda* mentioned mainly in *Brahattrayi*, it can be consider as Topology according to modern Anatomy. While describing the *shadangatva* of *Sharir Acharya* divided body mainly into six parts which is nearly equal to that of division of human body according to modern Anatomy. According to *Sushruta Adhoshakha/Sakthi* i.e., lower Limb is considered as part of body which starts from Kati Sandhi and ends at Padanguli, means a part start from the hip joint up to the heel, toes and phalanges, is known as *Adhoshakha* or lower Limb. That area region of *Adhoshakha* is exactly match with the lower Limb of modern Anatomy i.e., the area from hip and buttock up to the foot and toes is considered as *Adhoshakha* or lower Limb.

**In Apachi:** The site of Siravedhana mentioned was *Indrabastiradhashta Dvaya Angula* i.e., below the 4 Angula (approx. 7.8 cm) of *Indrabastimarma* Firstly we decide the site of Indrabasti Marma, that was mentioned as *Parshiprati Jangha madhya* i.e. In the middle of leg, from the line of heel. But *Dalhana* has given exact location of that Marma, was *Parshniprati Trayodash Angula thita* i.e., approx. 24 cm above middle in the leg from the line of heel bone. For selecting that point we have given posterior position to the cadaver and at that point, firstly marked site of *Indrabasti Marma* by orange colour as a big dot. Then below 4 Angula (7.8 cm)

\(^ {13}\) बेठ्यम् अल्मुखः शस्त्रव्ययूधनीयां सिराहद। (उल्हण - सु. सू. 5 / 5)

\(^ {14}\) तव शक्कक्मीहि द्विप्यं तवथा छेष्यं, श्चेष्यं लेख्या, बेठ्यम्, एय्यम्, आहायें, विसाय्य, सीव्यमिदि। (सु. सू. 5/5)
from that point, a point of Siravedhana was marked by red colour. Dissection was performed we observed a structure identified as Small Saphenous vein.

**CONCLUSION**

Thus, Siravedhana is a very scientific therapeutic measure and it is not only the process to bleed. The science of Siravedhana is explained in Sushruta Samhita in "Sutra" form, but the logic behind it is very scientific. Acharya has not given a single site for Siravedhana in all diseases but he explains specific site for individual disease or group of diseases. The scientific reason behind it can be explored with the help of the knowledge of anatomy & physiology of vascular system and the homeostatic mechanism of the body, to use this therapy more effectively and precisely.