



# A CRITICAL STUDY ON ANATOMICAL EXPLORATION OF SITES OF SIRA VEDHA IN UPPER LIMBS

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## ABSTRACT

Students that study anatomy from an Ayurvedic perspective come across a variety of contentious ideas that need to be addressed, such as Srotas, Snayu, Sira, and Kala. One of the complex and crucial ideas is sira. Siravedhan, also known as Vedhan of Sira (Vein Puncturing), is one of the management techniques used to treat different disorders. Therefore, taking into account its significance, a conceptual investigation must be conducted to determine the underlying structure for Urdhwa Shakhagat Vedhya Sira sites. This study found a correlation between Sira and the lymphatics and blood arteries. The Siravedha sites in Urdhwa Shakha are classified according to each location using contemporary nomenclature. Once this has been done, the selected spot is compared to the nearby superficial vein. As a result, in certain conditions, the underlying superficial veins are verified and regarded as Vedhya Sira of that place. The study confirms that in Plihavridhi, Yakrudakhya, and Kasa- Shwas, Vishwachi, respectively, the cephalic and basalic vein 4 angula above or below elbow joint must be considered as Vedhya Sira in addition to the left median cubital vein or left dorsal digital veins (in between Ring and little finger), right median cubital vein or right dorsal digital veins (in between Ring and little finger

**KEYWORDS-** Siravedha, Vedhya Sira, Sira etc.

## INTRODUCTION

When studying anatomy from an Ayurvedic perspective, sira is one of the complex, contentious, but crucial notions that is addressed. One crucial technique used in the treatment of a number of illnesses, including Grudhrasi, Unmad, Apasmar, etc., is siravedhan. However, Siravedhan is no longer as widely used as it once was. This may be because there are fewer skilled Vaidyas or because people lack trust. Specific locations for Siravedhan and Avedhya Sira have been given by Sushruta. According to Sushruta, Siravedhan is a primary (half)

of the Chikitsa in the Shalyatantra, much like Basti is in the Kayachikitsa. A thorough understanding of Siravedhan is necessary to get the desired results in therapy and to prevent problems from Avedhya Sira puncture. Siravedhan must thus always learn which anatomical structures can be referred to as Vedhya and Avedhya Sira. Therefore, taking into account its significance, a conceptual research must be conducted to understand the underlying structure for Urdhwa Shakhagat Vedhya Sira sites.<sup>1</sup>

## AIM & OBJECTIVES

- 1.To validate Urdhwa Shakhagat Vedhya Sira's anatomical structure
- 2.To verify the precise locations of Siravedha in Urdhwa Shakha according to current anatomy

## METHODOLOGY

The material of Urdhwa Shakhagat Vedhya Sira's collected from different articles, manuscripts, and authentic literature.

**Correlation of Sira with anatomical structure-** A. Sushrutokta Sira's relationship to anatomical structure: Ayurveda states that sira nourishes the body, but current science states that blood arteries and lymphatics nourish the body. It is clear to see from the following comparison table. Several sorts of Sira based on colour.<sup>2</sup>

S.N.	AYURVEDA	MODERN
1	<i>Aruna ( Vatavani)</i>	<b>Capillary</b>
	Convey <i>Vata dosha</i> . Blackish red in colour. Minute, if pressed suddenly get emptied and after removing pressure suddenly fill.	Convey deoxygenated blood. Blackish red in appearance. Minute, if pressed suddenly emptied and after removing pressure suddenly fill.
2	<i>Neela ( Pittavahi)</i>	<b>Vein</b>
	Convey <i>Pitta dosha</i> . Blue in appearance and are warm.	Convey deoxygenated blood. Blue in appearance.
3	<i>Gauri ( Kaphavahi)</i>	<b>Lymph vessel</b>
	Convey <i>Kapha dosha</i> . White in colour. Steady, sheet and nutritive.	Convey lymph. White or colourless. They are nutritive, cold and beaded.
4	<i>Rohini ( Raktavahi)</i>	<b>Artery</b>
	Convey <i>Suddha Rakta</i> . Red in colour. Neither warm nor cold.	Convey oxygenated blood and nutritive. Red in appearance.

(Ref - 13.Kadam Rupaji J. Et Al Interpretation of Urdhwa Shakhagat Vedhya Sira. Ijaar Volume Ii Issue 11 Jan-Feb 2017.)

**Therefore, we may tie the Sira to the lymphatics and blood arteries as follows:**

1. Capillaries and Aruna Sira are linked.
2. Neela Sira and veins are connected.
3. Lymph vessels are comparable to Gauri Sira.

4. Arteries and Rohini Sira are connected.

**For these Siravedhan indicated Vyadhi, the Vedhya Sira in Urdhwa Shakha is explained based on the following points:**

1. Pleehodara
2. Yakrudakhya
3. Kasa-Shwas
4. Vishvachi
  - i. Site that provides rationale
  - ii. Buildings at the site in question

### **1) PLIHA VRIDHI**

When treating Pleeha disorders, Siravedha should be performed particularly on the left upper limb at the medial side of the elbow joint, in the middle of the arm, or between Kanistika and Anamika (between the left little and ring fingers).<sup>3</sup>

#### **i) SITE THAT PROVIDES RATIONALE**

According to Sushruta, the elbow joint only has an anterior and a posterior side in anatomy. Therefore, the little and ring fingers of the left hand, or the medial aspect of the front side of the elbow, have been taken into consideration.<sup>4</sup>

#### **ii) BUILDINGS AT THE SITE IN QUESTION**

Strong median cubital veins connect the cephalic and basalic veins at the left elbow joint. It receives many tributaries from the forearm's front and releases the median vein, which pierces the antero-cubital fossa's facial roof and connects to the brachial artery's venae comitantes. Therefore, the left elbow's median cubital vein may be the vein prescribed for Siravedha.<sup>5</sup>

As an alternative, Sushruta suggested using the vein between the little and ring fingers for Siravedha. According to the situation, Siravedha can be considered in the dorsal digital veins of the left hand's little finger's lateral and ring finger's medial sides.<sup>6</sup>

### **2) YAKRUDAKHYA**

Siravedha should be performed, in particular, in the right upper limb at the medial side of the kurpar Sandhi (elbow joint), in the centre of the arm, or in the region between Kanistika and Anamika, in Yakrudakhya diseases.<sup>7</sup>

#### **SITE THAT PROVIDES RATIONALE**

Sushruta told medial aspect of Kurpara, in anatomy elbow joint have only anterior and posterior aspect. Hence, here we have considered medial aspect of anterior side of the elbow, or in between little and ring finger of right hand.<sup>8</sup>

According to Sushruta, the elbow joint only has an anterior and a posterior aspect in anatomy. So, between the little and ring fingers of the right hand, or the medial aspect of the anterior side of the elbow, has been taken into consideration.<sup>9</sup>

Strong median cubital veins connect the cephalic and basilic veins at the right elbow joint. It receives many tributaries from the forearm's front and releases the median vein, which pierces the antero-cubital fossa's facial roof and connects to the brachial artery's venae comitantes. Therefore, the median cubital vein of the right elbow may be the vein advised for Siravedha<sup>10</sup>.

As an alternative, Sushruta suggested using the vein between the little and ring fingers for Siravedha. According to the situation, Siravedha can be considered in the dorsal digital veins of the right hand's lateral little finger and medial ring finger.<sup>11</sup>

**Yakrudakhya** is the same as Kasa-Shwas.

**Vishvachi:** Siravedha is performed at Angula 4 above or below Kurpara Sandhi in Vishvachi because the discomfort in the arm would be identical to that of Grudhrasi.<sup>12</sup>

**SITE THAT PROVIDES RATIONALE:** 4 Angula on both sides of the Kurpara (elbow joint), 4 Angula above the Kurpara (elbow joint), and 4 Angula below the Kurpara (elbow joint).<sup>13</sup>

One noticeable vein, the cephalic vein, is located four angula above the elbow joint. There are two veins on the medial and lateral aspects of the 4 Angula below the elbow joint. Basilic vein and cephalic vein are two examples. Beginning at the lateral end of the dorsal venous arch is the cephalic vein. It wraps over the lateral forearm border and continues upward along the lateral biceps border. It pierces the pectoralis major's deep fascia. It pierces the joints of the axillary veins and the clavipectoral fascia<sup>14</sup>.

The basilic vein is a post-axial upper limb vein that originates from the dorsal venous arch, travels along the medial forearm border, around the elbow, through the deep fascia, and finally around the medial side of the brachial artery<sup>15</sup>.

## OBSERVATION

The current anatomical structures indicated in the tables can be used to explain the Siravedha site. In this case, Vedhya Sira refers to the superficial veins at that specific location.<sup>16</sup>

S. N.	Vyadhi <sup>8</sup>	Sushrutokta sites for Siravedha <sup>8</sup>	Modern structure and site
1	Pliha Vriddhi	Inner side of Kurpura Sandhi (at the centre of vaama-Bahu) OR at middle of left Kanistika and Anamika	Median cubital vein of the left side <sup>9</sup> .or left dorsal digital veins <sup>10</sup> ( in-between little and ring finger)
2	Yakrudakhya	Inner side of Kurpara Sandhi (at the centre of Dakshina-Bahu) OR at middle of right Kanistika and Anamika	Median cubital vein of the right side <sup>9</sup> .or right dorsal digital veins <sup>10</sup> ( in-between little and ring finger)-

3	<i>Kasa</i> – <i>Shwas</i> <i>a</i>	Inner side of <i>Kurpar Sandhi</i> (at the centre of <i>Dakshina-Bahu</i> ) OR at middle of right <i>Kanistika and Anamika</i>	Median cubital vein of the right side <sup>9</sup> .or right dorsal digital veins <sup>10</sup> ( in-between little and ring finger)
4	<i>Vishvachi</i>	4 <i>Angula Pradesh</i> above or below <i>Kurpara Sandhi</i>	Cephalic and basalic veins, <sup>11</sup> 4 <i>angula</i> above or below the elbow joint, lateral and medial respectively.

(Ref - Syamlal. S, Anup Bhosgikar, N. G. Mulimani. Anatomical and Clinical Relevance of Siravyadha In Relation with Marmas of Upper Limb. Int. J. Ayur. Pharma Research. 2014;2(5):12-15.)

To better understand the underlying structure of Urdhwa Shakhagat Vedhya Sira, discussion of the Vedhya Sira's general interpretation is crucial in this conceptual study. Avedhya Sira's specific phone numbers are listed in Sushruta Samhita along with their name and location. However, the precise name and number of Vedhya Sira are not specified while describing Siravedha. However, only Siravedha sites are mentioned. Despite the fact that the sites of Siravedha are described in the Samhita, no writings or literary scholarship on Vedhya Sira provide an explanation of the sites' underlying structures. For conceptual clarity, we thus attempted to analyze the Vedhya Sira's fundamental structure through this investigation.<sup>17</sup>

#### A) Based on the swabhav of Sira:

According to Sushruta's description of the swabhav of Sira in the eighth chapter of Sharirasthan, no one is educated to puncture Sira because they are unstable, or shift positions like fish. Therefore, it must be perforated carefully. Vedhya Sira has the attribute of Matsyavat, which literally translates to "slippery in nature." As we can see in practice, superficial veins where deep fascia is lacking, such as the dorsum of the hand and foot, are likewise slippery. Vedhya Sira are hence seen as be superficial veins.<sup>18</sup>

#### B) In accordance with Siravedha's protocol:

Sushruta advised Sira to be bound with fabric, leather, inner bark of trees, cripers, thin branches, or any other material to make them visible before Vedhan. In contemporary medicine, a tourniquet is used to highlight the superficial veins. It is obvious from this context as well that superficial veins must to be taken into account for Siravedha vidhi. A. Swabhav of Sira and B. Procedure of Siravedha, the aforementioned two references, make it clear that only superficial veins can be considered for Siravedha<sup>19</sup>

### CLINICAL IMPORTANCE

The spleen has grown larger in "Pleehodara," and it is now weighty and solid. The reticuloendothelial cells of the spleen quickly remove detritus, germs, and parasites by bloodletting the left sided medial cubital vein. Normally, stored blood is released into the circulation at large. The delicate RBCs are removed by washing. Effective drainage of the splenic vein. Kurpara marma is the traditional anatomical marker for this Siravyadha.<sup>20</sup>

In "Yakrutodara," the liver is enlarged by allowing blood out of the right sided medial cubital vein, where stored blood is expelled into the general circulation to relieve congestion. Fatty acids stored in the liver are mobilized by the production of the hormones adrenaline and nor-epinephrine. Enzymatic activity in hepatocytes is increased. In order to use the ferritin, new RBCs are created. All of these effects might lessen liver enlargement. Therefore, the aforementioned site is taken into consideration. Kurpara marma is the name of this Siravyadha Surface landmark.<sup>21</sup>

## DISCUSSION

Interpretation of Urdhwa Shakhagat Vedhya Sira sites, Based on the interpretation of findings derived through conceptual investigation, it has been discussed if Urdhwa Shakhagat Vedhya's anatomical structure has been confirmed. Using the literary references that are accessible to the Siravedha locations in Urdha Shakha described in various illnesses like Pleehodara, Yakrudakya, Vishvachi, and Kasa- shwas, it is possible to correlate Urdhwa Shakhagat Vedhya Sira with the underlying anatomical structure. The Siravedha sites in Urdhwa Shakha are classified according to each location using contemporary nomenclature. Once this has been done, the selected spot is compared to the nearby superficial vein. As a result, in certain conditions, the underlying superficial veins are verified and regarded as Vedhya Sira of that place.<sup>22</sup>

For instance, in Plihavridhi, the Siravedhan location is either on the inside of Kurpara Sandhi or in the center of Kanistika and Anamika on the left. According to contemporary anatomy, they are the ring and little fingers of the left hand, or the medial aspect of the anterior side of the elbow joint. The left medial cubital vein or the left dorsal digital veins are the corresponding underlying structures at these locations (inbetween Ring and little finger). Therefore, in Plihavridhi, these veins might be referred to as Vedhya Sira.<sup>23</sup>

According to Acharya Sushruta and Vagbhata, Siravyadha is a form of Raktamokshana treatment. It is nothing more than letting blood leave the body; it is one of the procedures mentioned in the treatment of Raktadusti-related illnesses.<sup>24</sup>

## CONCLUSION

The Urdhwa Shakhagat Vedhya Sira are the superficial veins of the particular places, according to the current conceptual analysis, which also suggests that in Plihavridhi, the left median cubital vein or the left dorsal digital veins (between the ring and little fingers) have been suggested for Siravedhan. In Yakrudakya and Kasa- Shwas, the right median cubital vein or right dorsal digital veins (between the ring and little finger) have been suggested for siravedhan. In Vishvachi, the angula above or below the elbow joint has been considered for Siravedhan. Cephalic and basalic vein. By researching the anatomical and clinical significance of siras, we discovered that siravyadha is an effective remedy for the disorders listed above.

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