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“Anatomical consideration of Urdhwa Shakhagat Avedhya Sira”

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ABSTRACT:

Sushruta samhita as the best one in *sharira*. *Sushruta* has explained anatomy of *sira* in *Sharir sthana* 7th chapter ‘*Siravarna Vibhakti Shariropkram*’. *Sira* is also one of the important structural concepts which are described by Acharya *Sushruta*. *Siravedhan* is an ancient method of treatment. *Sushruta* considered *siravedhan* as *Chikitsardha* i.e. half treatment of disease. *Sushruta* has mentioned specific sites for *siravedhan* as well as sites for *Avedhya sira*. *Vedhan* of *Avedhya sira* may cause severe harmful effect to body. *Siravedhan* is curative treatment in many diseases. So it becomes essential for *siravedhan* knowledge to

find out the anatomical structure to which one can label as *Avedhya sira* and also to avoid complications due to puncture of *Avedhya sira*. **Aim-** To study *Urdhwa shakhagat avedhya sira* and its anatomical consideration. **Conclusion-** *Avedhya sira* are anatomical structures which are either deep vessels or vessels which can lead to harmful effects by puncturing them.

Keywords: *Sira, Avedhya sira, Jaladhara, Urvi, Bahavi, Lohitaksha.*

INTRODUCTION:

The *Sushruta samhita* is one of the great treatises (*Brihatrayi*) of *Ayurveda* presenting mainly the school of surgery. *Sushruta samhita* as the best one

in *sharira*. *Sushruta* has explained anatomy of *sira* in *Sharir sthana* 7th chapter ‘*Siravarna Vibhakti Shariropkram*’. *Sira* is also one of the important structural concepts which are described by *Acharya Sushruta*. *Siravedhan* is an ancient method of treatment. *Sushruta* considered *siravedhan* as *Chikitsardha* i.e. half treatment of disease. *Sushruta* has mentioned specific sites for *siravedhan* as well as sites for *Avedhya sira*. *Vedhan* of *Avedhya sira* may cause severe harmful effect to body.

Siravedhan is curative treatment in many diseases. So it becomes essential for *siravedhan* knowledge to find out the anatomical structure to which one can label as *Avedhya sira* and also to avoid complications due to puncture of *Avedhya sira*.

Hence, it is important a conceptual study was carried out to know underlying structure of sites of *Avedhya sira* from *Urdhwa Shakha*.

AIM:

To study *Urdhwa shakhagat avedhya sira* and its anatomical consideration.

OBJECTIVES:

- To study *Urdhwa shakhagat avedhya sira* in *Ayurvedic* literature.

- To correlate sites of *Urdhwa shakhagat avedhya sira* with underlying anatomical structures.

MATERIALS:

- Literature:- *Brihatrayi, Sushruta samhita sharir sthana*.
- Modern literature:-
Anatomy books like Grey's anatomy, B.D chaurasia's human anatomy.
Previous work done related to this subject.

METHODOLOGY:

Literature study:

- A. Study of *avedhya sira* as per *Ayurvedic* literature.
- B. Finding of anatomical location of *shakhagat avedhya sira* compared with modern anatomy

A. Study of *avedhya sira* as per *Ayurvedic* literature.

Avedhya sira – In these *sira*, *siravedhan* is strictly prohibited, due to puncturing them deformity and death is sure. The no. of *avedhya siras* are 98 out of them 16 are in extremities, 32 in *kostha* and 50 in *urdhwajatrugat* region.

Table: *Avedhya sira* according to *shadanga*

<i>Sthaana</i>	<i>Avedhya sira</i>	<i>Number</i>
<i>Shakhagat</i>	<i>Jaladhara-1</i> <i>Urvi/Bahavi-2</i> <i>Lohitaksha-1</i>	16
<i>Parshwagat</i>	<i>Urdhwagami-2</i> <i>Parshwasandhigat-2</i>	4
<i>Shroni</i>	<i>Vitap-4</i> <i>Katiktarun-4</i>	8
<i>Prushthavansh</i>	<i>Urdhwagat Bruhati-4</i>	4
<i>Udar</i>	<i>Above the Medhra-4</i>	4
<i>Vaksha</i>	<i>Hrudya-2</i> <i>Stanmul-4</i> <i>Stanrohit-4</i> <i>Apalap-2</i> <i>Apasthambha-2</i>	14
<i>Shir + Griva</i>	<i>Neela-2</i> <i>Manya-2</i> <i>Matruka-8</i> <i>Krukatiika-2</i> <i>Vidhur-2</i>	16
<i>Hanu</i>	<i>Hanusandhi dhamani-4</i>	4
<i>Jivha</i>	<i>Rasavahe-2</i> <i>Vakvahe-2</i>	4
<i>Nasa</i>	<i>Aupanasikya-4</i> <i>Talugat-1</i>	5
<i>Netra</i>	<i>Apanggat-2</i>	2
<i>Karna</i>	<i>Shabdavahini-2</i>	2
<i>Lalaat</i>	<i>Aavrttagat-2</i> <i>Sthapnigat-1</i> <i>Keshantgat-4</i>	7
<i>Shankha</i>	<i>Shakhasandhigat-2</i>	2
<i>Murdha</i>	<i>Utkshepgat-2</i>	2
	<i>Simantgat-5</i> <i>Adhipatigat-1</i>	6
<i>Total</i>		98

B. Finding of anatomical location of shakhagat avedhya sira compared with modern anatomy

Jaladhara:

The cephalic vein is found in form of network (*jala*) with its tributaries which looks like *Jaladhara*.

Cephalic vein begins in the lateral part at the dorsal venous plexus of the hand winds upwards round the lateral border of the forearm to its anterior surface, receiving tributaries from both surfaces. Just below and front of the elbow it gives off the median cubital vein, which receives a communicating branch from the deep veins of forearm and passes medially to join the Basilic vein. The cephalic vein ascends in front of the elbow in the groove between brachioradialis and bicep brachii. In the upper 1/3 rd of the arm it lies in the interval between pectoralis major and deltoid. Entering the intraclavicular fossa, it passes under cover of the clavicular head of pectoralis major. It pierces clavipectoral fascia crosses the axillary artery and terminates in axillary vein.

When you puncture upper (terminal) part of the cephalic vein, bleeding occurs more than puncturing at its lower part. It is obvious because terminal part of cephalic vein carries

more blood than distal part. So terminal part of cephalic vein considered as *Jaladhara sira*.

Urvī (Bahavi):

Sushruta mentioned that *Urvī(Bahavi)* *sira* are 2 in numbers. If you see this site here we found 2 structures namely Brachial artery and Profunda brachii artery.

Brachial artery- It is continuation of axillary artery from the lower border of teres major. It ends about 1cm distal to the elbow joint at the level of the neck of radius by dividing into radial and ulnar arteries.

Profunda brachii artery- It is large branch, rising just below the teres major. It accompanies the radial nerve through the radial groove. It divides into anterior and posterior descending branches which take part in anastomosis around elbow joint.

So as per modern anatomy the centre of line joining head of the humerus to the condyles of the humerus is a considered as site of *Bahavi* marma. Brachial artery and profunda brachii artery are also situated at the same site. Hence we considered both arteries as a *Urvī (Bahavi)* *sira*.

Lohitaksha:

As per *Sushruta*, *Lohitaksha sira* is one in number. Here we found axillary vessels. As per modern anatomy, the centre of axilla which is just below the shoulder joint is considered site of *Lohitaksha marma* and that site is considered as site of *Lohitaksha sira*.

DISCUSSION:

In this study, discussion regarded about the interpretation of *Avedhya sira* is essential to know the underlying structure for *urdhwa shakhagat avedhya sira*.

During *siravedha*, *Sushruta* might have been observed that some specific structures punctured causes deformity or death. Such structures were categorized under *avedhya sira*. Due to this, *Sushruta* has given importance than *vedhya sira*. So *Sushruta* might have been mentioned exact number of *avedhya sira* only with its name.

Urdhwashakhagat avedhya sira includes: *Jaladhar* (1), *Urvi*(2), *Lohitaksha*(1).

Terminal part of cephalic vein in the arm can be considered as *avedhya sira* i.e. *Jaladhar*. Because when we punctured terminal part of cephalic vein, bleeding occurs more than its lower part. *Urvi(Bahavi)* is *sira marma* present in between centre of head of humerus and

condyles of humerus. Brachial and profunda brachii arteries are two important vessels found in that same site considered as *Urvi (Bahavi) sira*. *Lohitaksha sira* is one in number, here axillary vessels found. Centre of axilla is considered site of *lohitaksha marma* and the same site is considered as the site of *lohitaksha sira*.

CONCLUSION:

Urdhwa shakhagat avedhya sira and its anatomical consideration as follows:

- 1) *Jaladhar sira* is a terminal part of cephalic vein.
- 2) *Urvi (Bahavi) sira* are brachial artery and profunda brachii artery.
- 3) *Lohitaksha sira* is compared with axillary vessels.

Avedhya sira are anatomical structures which are either deep vessels or the vessels which can lead to harmful effects by puncturing them, so these are perfect guidelines for physician to avoid *siravedha*.

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