



# AMERICAN JOURNAL OF PHARMTECH RESEARCH

Journal home page: <http://www.ajptr.com/>

## Abhyantara Sakhagat Avedhya Sira of Sharir Sthana In Ayurveda

**Madavi Kishorkumar Patru<sup>1\*</sup>, Dinbandhu Shelke<sup>1</sup>, Shukla DV<sup>1</sup>, Nehare RS<sup>2</sup>**  
1. Dept of Sharir Rachana, R.A. Podar Medical College (Ayu), Worli, Mumbai 400018  
2. Dept of Sharir Rachana, Govt Ayurveda college Nagpur, Nagpur 400018

### ABSTRACT

Shakhas are important part of the body as they form a part of karmendriyas and the main angas among the sakhas. In ayurved the structure sira is of vital importance, we can see elaborate description about the siras in various classical texts. There are difference in the opinion regarding siras in different classics. Rakta mokshana is a treatment modality which covers half of shalya treatment of basti in kaya chikitsa. Being physicians it is important to know about the siras which are not to be punctured which conducting various surgical procedure to complications. So the study of Avedhya Sira is of importance. There are 700 siras. Among these 98 siras are avedhya. In sakhas there 4 siras are avedhya 1 Jaldhara 1 urvi 2 Lohitaksha. Urvi and lohitaksha abhyantara siras while jaladhara is a bahya sira as the study is undertaken on upper limb the siras can be renamed as Jaldhara 1 Bahvi 1 Lohitaksha. The Classification of blood vessels are based on different criteria in Ayurveda and contemporary science so it is difficult for the exact correlation of sira for, dhamanis or other vessels with vacant space inside to any particular structure such as vein or artery. This study is aimed to identify the Sirās mentioned in avedhya sira sakha of with comparison to the blood vessels of the extremity.

**Keywords:** Avedhya sira, Marma, Rakt mokshan, Bahvi, Lohitaksha, Urvi

\*Corresponding Author Email: [madavi.kishor00@gmail.com](mailto:madavi.kishor00@gmail.com)

Received 20 February 2017, Accepted 07 March 2017

Please cite this article as: Patru MK *et al.*, Abhyantara Sakhagat Avedhya Sira of Sharir Sthana In Ayurveda. American Journal of PharmTech Research 2017.

## INTRODUCTION

Ayurveda is not only science of medicine but also the way of life style. It is well organized system of medicine that has unique techniques for harmonious living. The preventive aspect is given more important than curative aspects<sup>1</sup>. Ayurveda speaks of every elements and facts of human life offering guidance that have been tested and refined over many centuries to all those who speak greater harmony, peace and longevity. The human body is considered as a attain Purushardhas. To attain purushardhas maintenance of health is necessary. Considering this our acharyas have given importance to sarira, its anatomical and physiological aspect and are dealt in detail. The basic principles of shareera sthana are found in all samhita of ayurveda. Among them Sushruta Samhita is considered to have given importance to sarira sthana<sup>2</sup>. one among such concept in anatomical aspect is sira. The knowledge of sira sarira is of utmost importance in shalya tantra as chikitsa in basti in kaya chikitsa, knowledge of siras require prime importance<sup>3</sup>. It can be said that half or rather entire Śalyatantra is equivalent to ‘Sirāvyadha’ alone i.e. a number of diseases are likely to be cured only through this simplest technique. Siravyadha is also accepted as half of the therapeutic measure in Śalyatantra like Vasti in Kayachikitsa<sup>3</sup>. In medical science it is important to have a better idea on what all things are prohibited than what all are the possible treatment, since performing the prohibited may endanger the life of the patients same is in case of avedhya siras. So the knowledge of avedhya siras is of greater importance in surgical aspects. Acharya has mentioned diseases that are not relieved so quickly by Snehana, Aswedanadi measures; in this situation Siravyadha is an emergency management to achieve better results<sup>3</sup>. In case of treatment of trauma also the knowledge of these siras helps in easy prognosis of the condition and helps the physician to manage the situation and life of the patient. Here avedhya siras which are not supposed to be punctured while doing vayadhana karma or to be taken care of during surgery, these if punctured prove to be fatal, in case of trauma also. The concept of avedhya siras are much more merged with the concept of marma. The knowledge of marma and siras are essential for understanding the concept of avedhya siras. Marmas are the vital points in the body which prove to be fatal when subjected to trauma. Details knowledge of marma is important from surgical point of view, surgical procedures like Agnikarma, Ksharkarma, Raktamokshana etc, are used as a part of the surgery. While conducting these surgical procedures, the knowledge of marma sthana to avoid complications<sup>3,4</sup>. So in treatment and surgical procedures Avedhya sira study is important. In present literature, there is gap of knowledge incomplete information pertaining to Avedhya sira at present modern era. To fulfil this gap present study is taken up to substantiate exact anatomical

location of Deep Avedhya Siras in Urdhwa and Adhah Shakhas .This study is aimed to identify the Avedhya Sirās mentioned in Sharir sthana with comparison to the blood vessels of the Both extremity as per the modern Anatomy. Although the references are available in the original Ayurvedic texts, the direct reference of sites of Avedhya sira in Upper and Lower extremities in relation to its anatomical significance is not available. To see relevance with marma illustrated description regarding basic Ayurvedic concepts with special reference to sites of Avedhya sira. In this study an attempt has been made to compile literature regarding Avedhya Sira and relevance structure from a wide range of Ayurvedic texts. This study also contains assessment of the vessels cadavers in relation to the anatomical structures both extremities and identification of related structures in the sites of Avedhya Sira.

## REVIEW OF LITERATURE

### **Sakhas :**

Sakha means 4 limbs of the body or the hand and foot<sup>4</sup>. Bahu the forearm, the arm between the elbow and wrist. In medic, the whole upper extremity of the body as opposite to sakthi, the lower extremity<sup>5</sup>. It has been mentioned in the texts that whatever had been mentioned in the sakthi , the same will be seen in bahu also<sup>3</sup>.

### **Sira :**

Sira is mentioned as that which to flow. The term ‘sarana’ mentioned as moving from one place to another<sup>1</sup>.

**Utpathi:** Sira is formed from asruk/rakta<sup>1</sup>. Sira is formed from the snehamsha of medas and mansa along with the help of vayu undergoing mrudu paka<sup>3</sup>.

**Synonyms of Sira :** Sira, srotas ,marga,khan,dhamani,nadi,asaya<sup>3</sup>.

### **Prabhava Sthana**

Nabhi’ is considered as prabhava sthana or mula of Sira<sup>3</sup>. ‘Hrudaya’ is the site where mula siras are attached and it helps in the production of Oja throughout the body<sup>5</sup>. The ten mula Siras are attached to Hrudaya these siras helps in circulating the ojas throughout the body<sup>6</sup>. The pleeha which is situated below the hrudaya on the mula of siras .It is formed from the blood<sup>7</sup>. Another opinion regarding the mula of siras is hrudaya even through is attached directly to the dhamanis the rasa which is flowing through the dhamnis from the hrudqaya is ultimately drained back to the through hrudaya the siras . So the prabhava sthana of siras can be considered as hrudaya<sup>8</sup>.

### **Number and Distribution of Sias**

There are 700 siras in body<sup>3,6,1</sup>. All the siras present in the body are connected to the umbilicus,

and from there, they spread to all directions. Prana resides in the siras and the umbilicus is the seat or residence of prana. The umbilicus is surrounded by siras similar to the axle hole being surrounded by spokes<sup>3</sup>. The number of siras mentioned that even though it is numerous due to its branching pattern for understanding it has been mentioned as 700 in number<sup>3</sup>. These siras are having specific function according to the nature of substance it carries. These siras are spreaded in the body like water channels in a garden in general it helps in doing upasneha, anugrahana and especially akunchana, prasarana etc of body<sup>3</sup>. For this acharya has given simile of large field being nourished by small channels of water they spread like the venation of leaf, nabhi is there is mula and from there, these spread upwards, downwards and side words<sup>3</sup>. Acharya on explaining the term upasneha explains it as nourishment or sustenance of the body. The term anugrahana refers to maintenance of paripalana. The term akunchana, prasarana points out the movement of the body and the term adhi refers to the activities like sleep, wakefulness etc<sup>3</sup>. Some acharya having a different opinion about siras. According to acharya there are ten mula siras which are connected to hrudaya. Through these siras, ojas is transported throughout the body which further helps in different activities of body in commentary mention mula as pradhan sira<sup>5</sup>. The opening of these siras and dhamnis which divides into smaller and smaller till it reaches minute forms and become two lacs ninety nine thousand six hundred and fifty (299650) in number. These divide into hair pits of body. These bind the body and make it look wider<sup>5</sup>. In the hair pits and mustaches are present. So it will be connected to these siras. These hairs are getting nourishment through these siras mukhas. Sweat is also transported through these channels and is thrown out through these pits. The potency of the drugs which are applied on the skin like anubhyang, lepa etc. after they have undergone paka in the skin is transported through these channels. It also conveys the sensation of touch<sup>5</sup>. Acharya had given a better description on the count of siras and dhamnis. Even though the number of siras are mentioned as seven hundred those further divide into minute forms to form twenty nine thousand nine hundred and fifty six 29956 siras. This count is at the label. When the opening size of hair or moustache<sup>1</sup>. Chakrapani commenting on it clarifies, there is no clash between the facts that there are 700 siras in the body in gross form and 29956 siras in subtle form. This count is only possible to the minute level. There can be more than this as it divides further to become smaller branches<sup>1</sup>. The siras are having wider opening in the beginning and smaller opening at the ends. They spread in the body like venations of the leaf and are generally 700 in number<sup>6</sup>. In samhita we can see a different opinion about the branching pattern of siras the dhamnis which are attached to the hrudaya will divide into 20 after reaching the length of 4 angul. In this way these dhamnis will become sixty in number by dividing further. These further divide into three hundred

thousand siras .These siras spreads out in whole body similar to tree which comes down coz of the weight of the fruits and the foliage it bears or when it get stretched or extended down if struck by a stone .in each every pits of hair there is an exit aperture for the siras out of which the sweat trickles out<sup>8</sup>. According to sushruta samhita among the 700 siras mentioned ,mulasiras are 40 in number 70 they are 1)Vatavaha 10 in number 2) Pittavaha 10 nin number 3) Kaphavaha 10 in number 4) Raktavaha 10 in number. The 10 vata carrying siras on reaching the seat of vata , divide themselves into 175 .the pitta carrying siras devide into the same number in the seat the Kapha carrying siras devide into 175 siras after reaching the seat of kapha . similar is the case of rakta carrying siras on reaching yakrut and pleeha.Thus together they form 700<sup>3</sup>. Acharya consider yakrutha and pleeha as mula for rakta vahi srotas<sup>5</sup>. According to acharya vagbhata the mulsira which are speeded like venations of the leaf is again divided in to four types which are 175 each<sup>5</sup>. They are

1. Vataraktavaha siras 175
2. Pittaraktavaha siras 175
3. Kapharaktavaha 175
4. Shudhraktavaha 175

Acharya in his treaties is giving a different opinion hrudaya is connected to 10 dhamnais ,in this four upwards ,two in oblique direction and four moves downwards .from these dhamniies the mulasiras takes origin in an oblique direction in related to dhamnies<sup>8</sup>. There are vatavahini siras is none limb .similarly is in case of other limbs .so in total there are 100 vata vahi siras in all four extremities together<sup>3</sup>. 89. Sakhagat vatavaha siras according to acharya.

Upper limb  $25 \times 2 = 50$ , Lower limb  $25 \times 2 = 50$

According to acharya in each limb there are 100 siras. So total of 400 siras are present in four limbs together<sup>5</sup>.

### **Sira Sandhi**

In context of sandhi it is told that apart from the sandhis there are sandhis in sanayu, peshi and siras . These sandhis are two thousand in number<sup>9</sup>.

### **Importance of Sira in Marma**

Marmas are points where there is the conglomeration of mansa sira , snayu, asthi and sandhi in different proportion .the type of marama is determined by the abundances or scarcity of these structure in the marma.Prana resides in this place by nature and hence when these are injured it produces their respective results<sup>3</sup>.There are four types of siras in the body .they are vatavahini sira ,pittavahini sira , kaphavahini sira and raktvahini sira .these four types of siras are generally seen in

marma .these provide nourishment to rhe body and especially provides nourishment to the body and to the other four structure in the maram viz snayu ,asthi, sandhi, and mamsa<sup>3</sup>. The maram a sthanas provide ashraya to all 4 types of siras, which provides nourishmentto the whole shareera .Hence when a kshatha occurs to a marma sthana it results in excess srava which leads to dhatukshaya & there by vata vridhi .This aggravated vata further leads to pitta vridhi. These two conditions together create different types of severe pain &other upadravas and ultimately lead to death of the individual<sup>6</sup>.

### **Sira Marma**

Sira marma are forty one in number<sup>3</sup>. They are neela , dhamani, matruka, srugataka, apang , sthapani , phana, stanamoola,apalapa, apasthambh , hrudaya, basti, nabhi, parswasandhi, brahati, lohitaaksha and urvi<sup>3</sup>.

### **Sira Vyadha Lakshana**

When the sira is cut or torn there will be profuse bleeding from the wound which resembles the colour of insect indragopa I.e bright red in colour when there is an injury to the siras vata will get aggravated in the body which further lead to many diseases<sup>3</sup>.

### **Importance of Sira**

At the time of explaining the surgery procedure acharya specifies that the surgeon should take care of the structure like marma,sira , sandhi,asthi and dhamani .This shows the importance of sira<sup>3</sup>.

### **Similarities and Disimilarities Between Sira, Dhamani And Srotus**

The siras and dhamanis are modification of srotus only .according to others dhamanis and siras are different and states that even though they are different from one another they can be considered as one and same due to its close proximity, similar function and minuteness<sup>5</sup>.Acharya is having a contrary opinion in this regard, He explains that there are some authors who consider that siras dhamnis and srotas are different modification of sira only and denies this opinion putting forward reason such as<sup>3</sup>.

- a) Difference in features.
- b) Difference in moolasthanas or prabhava sthana.
- c) Special function.
- d) As it is described as different in authentic texts.

He also says the reason for the confusion may be because of

- a) Closeness of structures.
- b) Similarity in description in texts.
- c) Similarity in fuction.

d) Minuteness.

### **Avedhya Sira**

Avedhya sira are those vessel which should not be subjected to cut or punctured or else prove to be fatal .before going in to the details of avedhya siras itIs better to have an idea on sira vyadha is one among different types of rakta mokshana (bloodletting)

### **Rakta mokshana**

The word rakta means coloured, dyed, tinged, painted, crimson and blood red.The word rakta moksha means bloodletting, bleeding or venesection<sup>10</sup>. Therefore letting out of blood is known as raktamokshana.

### **Etymology of vyadha**

The term vyadha means striking or hitting<sup>11</sup>.

### **Vedhya sira and avedhya sira**

Acharyas described vedhya siras are those which won't produce much complication if interfered with during the surgical process. Even though sira vyadha is mentioned it is also mentioned that the blood should be drawn in smaller quantities for curing various diseases since blood itself is the cause of the body is maintained by blood .blood itself is life<sup>3</sup>. Rakta is one among the dasa pranayatana also .so it should be saved from excessively<sup>5</sup>. Avedhya sira are those on which on which vyadhana karma should not be done. If injury caused due to trauma also its proven fatal as it causes disability or death<sup>3</sup>.During the description of the treatment of the disease such as unmade visamjwara and apasmarsira vyadha is advised to be done at the junction between sankha and kesanta pradesa<sup>1</sup>.

### **Vyadhana praman**

In muscular areas, puncturing should be of the size of the yava (barely Grain) in nother areas it should ½ yava or on vrihi (rice) using a vrihimukha sastra. Siras on the bones should be punctured to the size of ½ of yava using a kutharika sastra<sup>3</sup>.

Avedhya Sira According to Acharya Susruta

<b>Sr No</b>	<b>Location</b>	<b>Total no of siras</b>	<b>Avedhya siras</b>
1	Sakha	400	16
2	kosta	136	32
3	urdhvajatrugata	164	50
	Total	700	98

Astang sangraha is also having the same opinion<sup>5</sup>. Aharya vagbhata has slightly modified the knowledge of avedhya siras . his concept is that apart from these 98 avedhya siras, those siras

which are oblique, short, and tortuous and narrowly placed in the subject should also be. Included under this heading<sup>6</sup>.

Sira marma in urdhwa sakha

- a) Lohitaksha 1 in no
- b) Urvi 2 in no

There are one hundred siras in each of the extremities out of which one by name jaladhara, two which are situated deep inside known as urvi and one by name lohitaksha are not to be punctured .thus sixteen siras of the sakhas are avedhya<sup>3</sup>.In case of upper limb or urdhwa sakha we can consider urvi as bahvi since the sira is on bahu as in place of urvi in lower limb<sup>3</sup>.

### Sakhagat avedhya sira

Sr No	Name	In one limb	In 4 limb
	Jaldhara	1	4
	Bahvi/ Urvi	2	8
	lohitaksha	1	4
			16

Among these, sixteen in the extremities, thirty two in the trunk and fifty above the shoulders are to be considered as Avedhya<sup>3</sup>.There are one hundred veins in each of the extremities; out of which one byname Jaladhara, two which are situated deep inside known as Urvi and one by name Lohitāksha are not to be punctured. Thus sixteen veins of the Śakhās are Avedhya<sup>3</sup>. Vagbhata also mentioned the number of Avedhya Siras as Acharya Suśruta, but he has slightly modified the knowledge of Avedhya Sirās. His concept is that apart from these 98 Avedhya Siras, those Siras which are oblique, short, and tortuous and narrowly placed in the subject should also be included under this heading<sup>9</sup>.

### Urvi sira

Acharya explains that there are two siras named urvi which are not to be punctured<sup>3</sup>. Dalhana acharya commenting on the urvi sira states that these siras are located in the region of urvi marma . Even though two urvi siras are mentioned , acharaya sushruta had mentioned only one marma in name urvi . dalhana acharya explains that it is because of the closeness of the siras in the location of the marma ,the marma is explained as one even though there are two siras<sup>3</sup>. It is mentioned that the marmas located in arm should be named according to the location. So urvi marma in hand refers to bahvi marama<sup>3</sup>.

### Adho shakha Urvi Sira

- 1) Location - Middle of the thigh
- 2) Number - 2marma points one on each thigh

- 3) Types - Sira
- 4) Size - 1 Angul
- 5) Quality related to injury - Vaikalyakar type of marma.
- 6) Symptoms if injured - Injury to the important structures through this vital point artery, nerve and vein can cause wasting, dysfunction of the muscle and bleeding.
- 7) Effect of injury - Injury to this sira marama leads to loss of blood and emaciation of the limb<sup>6</sup>. If injury to this sirsa marama occurs persons may die because of loss of blood or will lead to paralysis. Another opinion is that if this marama is injured the function of one side of the body will be lost due to loss of blood<sup>3</sup>.

### **Urdhva sakha bahvi Sira**

- 1) Location - Middle of the arm
- 2) Number - 2 marma points one on each thigh
- 3) Types - Sira marma
- 4) Size - 1 Angul
- 5) Quality related to injury - Vaikalyakar type of marma.
- 6) Symptoms if injured - Injury to the important structures through this vital point – artery, nerve and vein can cause wasting, dysfunction of the muscle and bleeding.
- 7) Effect of injury - Injury to this sira marma leads to loss of blood and emaciation of the limb<sup>6</sup>.

### **Lohitaksha Sira**

This is Avedhya Sira as well as Sira Marma according to . This Marma is situated above Urvi Marma and below Vankshana Sandhi (Hip Joint at the root of the Ūru). On injury this causes paralysis of the muscles or wasting of the Sakthi (lower limb) due to loss of blood. It is a Vaikalyakara Sirā Marma<sup>6</sup>.

### **Adho Lohitaksha Sira**

- 1) Location - Below Vankshana Sandhi (Hip Joint) at the root of the Ūru.
- 2) Number - 2 marma points one on each shakha
- 3) Types - Sira marm
- 4) Size - ½ Angul
- 5) Qualities related to Injury- Vaikalyakara type of Marma
- 6) Symptoms if injured - Injury can cause death from loss of blood and paralysis of the lower limb.

7) Effect Injury - If injury to this sirsa marma occurs persons may die because of loss of blood or will lead to paralysis. Another opinion is that if this marma is injured the function of one side of the body will lost due to loss of blood<sup>3</sup>

### **Urdhva Lohitaksha Sira**

1. Location -The place where these are Vankshan sandhi to the body
2. Number - 2 marma points one on each SHAKAHA
3. Types - Sira marma
4. Size - ½ Angul
5. Qualities related to Injury- Vaikalyakara type of Marma
6. Symptoms if injured- Injury can cause death from loss of blood and paralysis of the lower limb.
7. Effect Injury - If injury to this sirsa marma occurs persons may die because of loss of blood or will lead to paralysis . Another opinion is that if this marma is injured the function of one side of the body will lost due to loss of blood <sup>3</sup>.

## **MATERIALS AND METHOD**

Literary and conceptual study was on the data compilations from the

Brihatrayees, Laghutrayees, and other classical books including journals, presented papers, previous work done and co-related, analyzed with the knowledge of contemporary science on the subject.

### **Source of data**

- 1) Dissection of the Upper limb and lower limb of cadavers at the region of Avedhya siras as explained in classic was done in the dissection hall at R A Podar college of Ayurveda medical college Mumbai.
- 2) Surface marking of the marma points have been done based on the ayurvedic, parameter, angula and explained with the help of modern surface anatomy observation were analyzed and co related in the view of ancient description of avedhya siras in sakha with special reference to modern science.
- 3) Literary works books, journal including published ones on the concept related to subject has been reviewed and related information are collected and analyzed scientifically

### **Method of collection of data**

- 1) Cadaver study was conducted on fore limbs and lower limbs of three cadavers in dept.

- 2) Observation of surface and regional anatomy on cadaver dissection with the *avedhya siras* in the *sakhas* or both limbs region as explained in *ayurved samhita*.

### **OBSERVATION**

The dissection of 6 limbs of three cadavers was carried out in the department of anatomy

#### **Urdhva bahvi sira**

The location of the *sira* is said to be the middle of the arm. The structures observed are

#### **Muscles –**

*Biceps brachii*, *coraco brachialis* and *brachialis* are observed. In the posterior compartment *triceps brachii* is present.

#### **Vessels**

*Brachial artery*, next to the *latissimus tendon* it gives rise to *profunda brachii artery* which curves round deeply towards the *triceps*. The muscular branches of the both arteries are also observed. *Cephalic vein*, *brachial vein* and *basilic vein* are also observed. The *cephalic vein* is seen on the lateral aspect or radial side of the arm whereas the *basilic vein* is seen on the medial side. These two are superficial veins of the arm. The *brachial veins* accompany the *brachial artery*.

#### **Nerves**

*Ulnar nerve* lies medial to the *brachial artery* and the *median nerve* they lie closely together in the upper part of the arm, half way down the arm they diverge and *ulnar nerve* slants backwards. It runs down medial to the *triceps tendons* and behind the *medial epicondyle*. *Median nerve* lies lateral to the *brachial artery* passes medially to the *biceps brachii* and above it at the middle part of the arm reach to its medial side at the level of elbow *radial nerves* lies up above all the nerve and the artery, below the tendons of *latissimus dorsi* it runs back between the long head and medial head of *triceps*. On the back it lies on the bone in between the medial and lateral head of the *triceps* supplying the same and emerges just above the origin of *brachio radialis*. It reaches the lateral epicondyle under cover of *brachio radialis* supplying the muscle. *Musculo cutaneous nerve* lies most laterally and supplies the *coraco brachialis* and runs deep to *biceps brachii* and above the *brachialis* muscle supplying both.

#### **Bones**

*Humerus*

#### **Urdhva lohithaksha sira**

The location of the *sira* is explained as on the *lohithaksha marma*. It is located above the *bahvi marma* and below the shoulder joint. Structure observed are

#### **Muscle and tendons**

Deltoid muscle is the most superficial muscle observed in this region. Pectoralis major muscle lies immediately below the deltoid from the front .it defines the anterior wall of the axilla. The posterior nr wall is defined by lattismus dorsi which is attached to the posterior edge of the bicepittal groove .Characo brachialis inserts lower to the insertion of the pectoralis major muscle .teres major is attached on the crest of the lesser tubercle and choracho brachialis can be seen from behind .in the most inner aspect we can observe the tendon on long head and short of biceps brachii muscle. Posteriorly the triceps brachii is present.

### **Vessels**

Cephalic vein along with its tributaries is observed in the groove between the deltoid and pectoralis major .it is superficial in nature .the axillary vein comes up from the arm and passes beneath pectorallis minor , the cephalic vein joins with the subclavian vein medial to the pectoralis minor .axillary vein lies beneath the median nerve and the axillary artery.Axillary artery with its branches is observed .the branches areise behind the pectoralis minor they are thoraco acromial and lateral thoracic artery. In the axilla it gives rise to sub scapular artery and the anterior and posterior circumflex humeral artery

### **Nerves**

Nerves are seen behind the pectoralis minor muscle .in the region the three cords, lateral, medial and posterior cords are observed. axillary artery is found surrounded by these cords . the lateral cords divides to become the musculo cutaneous nerve and one half of the median nerve .the medial cord divides to provide the other half of the median nerve and the ulner nerve .posterior cord divides to give off the axillary nerve and the radial nerve.The medial cord gives of the branch, the medial pectoral nerve ,The lateral cord gives rise to branch, the lateral pectoral nerves The posterior cord gives off the branchvees the upper and lower subscapular nerves and thoraco dorsal nerve

### **Bones**

Humerus

### **Aadhah urvi sira**

Location of the sira said to be Centre of the thigh.The structure observed are

### **Muscle**

Sartorius ,Rectus femoris ,adductor longus,pectineus,vastus lateralis, vastus meialis, vastus intermedialis, gracilis posteriorly biceps femoris.semitndaneous and semimebraneous.

### **Vessels**

Femoral artery, profunda femoris, lateral and medial circumflex artery, deep external pudendal artery are observed. Descending genicular artery. Femoral vein to branches to the artery. Superficial veins of the groin ends in the great saphenous vein and circumflex vein

### **Nerve**

Femoral nerve it arises from the lumbar plexus and it ends by dividing into a number of branches 2 cm below inguinal ligament Muscular- pectineus, Sartorius, quadriceps femoris with articular branches Cutaneous branches- Anterior cutaneous nerve of the thigh (medial and lateral), saphenous nerve.

### **Bone**

Femur

### **Adhah lohitaaksha**

The location of the sira is explained as on the lohitaaksha marama. It is located above the urvi marama and below inguinal ligament

### **Muscle**

Sartorius rectus femoris, Quadriceps femoris, pectineus, adductor brevis, gracilis, adductor magnus, psoas major and iliacus.

### **Vessels**

Femoral artery, profunda femoris, lateral and medial circumflex artery, deep external pudendal artery are observed. Descending genicular artery. Obturator artery Femoral vein to branches to the artery. Superficial veins of the groin ends in the great saphenous vein and circumflex vein

### **Nerve**

Femoral nerve it arises from the lumbar plexus and it ends by dividing into a number of branches 2 cm below inguinal ligament Muscular- pectineus, Sartorius, quadriceps femoris with articular branches Cutaneous branches- Anterior cutaneous nerve of the thigh (medial and lateral), saphenous nerve., Obturator nerve,

### **Bone**

Femur

## **CONCLUSION**

Urdhwa sakha is considered as the region extending from kaksha sandhi to the tip of the middle finger hasta. Adhah shakha is considered as the region extending from kati sandhi to the tip of the middle finger of pada. Sira is hollow structure that helps in sarana of vata, pitta, kapha and rakta. So in the present study sira has been considered as blood vessels.

The *avedhya siras* explained in deep *urdhwa sakha* are three in number, they are the *lohitaksha 1*, and *bahvi 2*. The *avedhya siras* explained in deep *adhah sakha* are three in number they are the *lohitaksha 1* and *urvi 2*.

The deep *sira* and the *marma* of that region are a same place and name 1-*Lohitaksa*, 2-*bahvi* in *urdhwa sakha*, 1-*Lohitaksha*, 2- *urvi* in *adhah shakha*.

The location of *bahvi sira* is explained as in the arm .it is further explained that there are two *bahvi siras* .the *avedhya siras* considered in this region are *cephalic vein* and *basalic vein* injury to *bahvi siras* lead to emaciation of the limb due to sever blood loss as it is difficult to stop bleeding from these veins in this region any surgical intervention in the region may damage the relative also which will lead to the paralysis of all the muscle of the lower limb.

The location of *urvi sira* is explained as in the thigh .it is further are there are two *urvi siras* .the *avedhya siras* considered in this region are *femoral artery* .and *femoral vein* injury to *urvi siras* lead to emaciation of the limb due to sever blood loss as it is difficult to stop bleeding from these vessels in this region any surgical intervention in the region may damage the relative nerve also which will lead to the paralysis of all the muscle of the lower limb.

Location of *lohitaksha sira* is at the region of *lohitaksha marma*. The region can be considered as on lower part of lateral wall of *axilla* .the *avedhya sira* considered in this region is *axillary vein* .as *axillary vein* is located between the anterior and posterior walls of the *axilla* it is difficult to stop bleeding from the *axillary vein*. As cords of the *brachial plexus* lies in close proximity to the *axillary vein* any surgical intervention in the region may damage the cords also which will lead to the paralyzed of all the muscle of the upper limb.

Location of *lohitaksha sira* is at the region of *lohitaksha marma*. The region can be considered as below *Vankshana Sandhi* (*Hip joint*) at the root of the *uru*. The *avedhya sira* considered in this region is *femoral vessels*. .th it is difficult to stop bleeding from the *femoral vessels* any surgical intervention in the region may damage the nerve relative nerve also which will lead to the paralysed of all the muscle of the lower limb.

The surgical importance of these *avedhya sira* is that it will lead to complication if injured.Knowledge of *Marmasthana* is required to carry out the *Siravyadha* procedure effectively.

It has been clearly mentioned the procedure of *Siravyadha* should not be conducted on *Avedhya Siras* which are *Marmaśrita*. The surgical importance of these *avedhya sira* is that it will lead to complications if injured.

## REFERENCE

1. Agnivesha.Vaidya Jadavji Trikamji Acharya,editor.Charak Samhita revised by Charaka and Dridhabala with the Ayurveda-Dipika commentary of Shri Chakrapanidatta. Varanasi.Chaukhamba Orientalia,Reprint -2009.P-,185,187,338,473,738.
2. Vaidyakiya Subhashita Sahitya.Campiled by Dr.K.Leela.Vidyut Prakashana-2002.P-5, 119.
3. Sushruta .Vaidya Jadavji Trikamji Acharya and Narayan Ram Acharya,editor.Sushruta samhita with the Nibandh Sangraha commentary of Dalhanacharyaand the Nyaya Chandrika Panjika Commentary of Gayadasacharya.Varanasi,Chaukhamba Surbharati Prakashan :Reprint-2012.P-19,66,120, 354,355,357,364,370,372,375,376,377,383, 383,380,378,372,514,738,824.
4. Ayurvedacharya Venimadhava Shastri Joshi and Ayurvedavisharad Narayan Hari Joshi ,editor.Ayurvediya Mahakosha arthad Ayurvediya Shabdakosha,Sanskrita Prathama Khanda.Mumbai,Maharashtra Rajya Sahitya Aani Sanskriti Mandal -1998. P-815,975.
5. Vahata or Vridha Vagbhata.Dr. Shivprasad Sharma,ditor.Astang Sangraha with the Sasilekha Commentry by Indu.Varanasi,Chowkhamba Sanskrit Series office ISBN-81-7080 -189-9 P-299,305,308,310,312,314,965.
6. Vagbhat.Pt.Hari Sadasiva Sastri Paradakara ,editor.Astang Hraday with Sarvanga Sundara commentary of Arundatta and Ayurveda Rasayana Commentary of Hemadri.Varanasi,Chaukhambha Sanskrit Sansthan Reprint-2010,P-,389,390,391, 409,410,416,956.
7. Bhava Misra.Bhava Prakash with commentary of DrBulusi Sitaram .Varanasi,Chaukhambha Orientalia-.2006-P-25,742.
8. Bhela .Prof .Priya Vrat Sharma,editor. Bhela samhita with English Translation Varanasi.Chaukhamba Varanasi,Reprint 2008,P-89,660.
9. Vagbhata,Kaviraj Atri Dev Gupta,editor.Astanga Samgraha with hindi commentary .Vol-1.Varanasi,Chaukhamba Sanskrit Series office P-303,305,408.
10. Sir Monier Monier Willaams,editor.A Sanskrit –English Dictionary.Delhi,Motilal Banarasdas,2005.P-,861,862,1333,.

11. Amaramishra.Pandit Haragovinda Shashtri,editor.Amarakosha with Ramashami commentary of Bhanuji Dikshita.Varanasi, Chaukambha Sanskrit Sansthana,Reprint 2006.P-527,664.

***AJPTR is***

- Peer-reviewed
- bimonthly
- Rapid publication

Submit your manuscript at: [editor@ajptr.com](mailto:editor@ajptr.com)

