

ANATOMICAL PERSPECTIVES AND CLINICAL IMPORTANCE OF CONCEPT OF
AVEDHYA SIRAS

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ABSTRACT

Ayurveda texts provide elaborative information about the human body and its anatomical positioning. *Acharya shushrut* mentioned anatomical perspective of *Sira* in *Sharir sthana* while *Sira* described as *Sarnat sira* in *Sutra sthan*. *Sira* are four types mainly; *Aruna*, *Sweta*, *Lohita* and *Neela*, these are associated with *Doshas* (*Vatta*, *Pitta* & *Kapha*) and *Rrakta*. Blood flow from *Sira* by the virtue of *Saran kriya*. On the basis of susceptibility towards the *Sira Vedhya*, these can be further classified into two types *Vedhya siras* and *Avedhya siras*. The number of *Vedhya* and *Avedhya sira* are 602 and 98 respectively. The *Vedhya siras* can be punctured but *Avedhya sira* are prohibited for puncturing and if punctured mistakenly then harmful effects may occurs. Diseases like *Unmad*, *Apasmar* and *Vishvachi*, etc. can be treated through the concept of *Sira Vedhya*, however consideration of *Avedhya sira* is prerequisite to avoid fatal complications. Considering significance of this fact present article explained anatomical as well as clinical view on *Avedhya sira*.

KEYWORDS: *Ayurveda*, *Avedhya Sira*, *Sira Vedhya*, *Sharir*, *Vein*, *Puncture*.

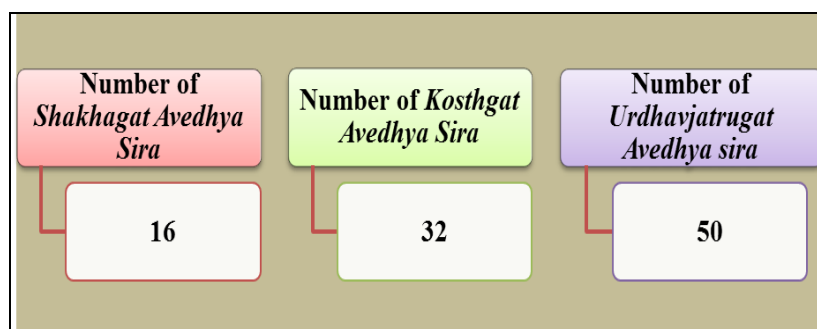
INTRODUCTION

Sira means veins which also elaborated as *Neela sira*, drains impure blood towards the heart. *Acharya shushrut* described *Nabhi* as the origin of *Sira*, they carries *Doshas* therefore termed as *Sarvavaha* due to the transportation of all types of *Doshas*. *Siravedhan* is important method of treatment in which specific vein is punctured for therapeutic purpose. Some *Sira* is contraindicated for venesection and these are called as *Avedhya Sira*.^[1-3]

Medical science described 602 are *Vedhya* and 98 are *Avedhya sira* out of total 700 *Sira* of human body. *Sira vedhan* is a method comes under the heading of

Raktmokshan and in this process vitiated *Doshas* are removed along with impure blood to treat certain diseases. Specific *Sira* need to be punctured in particular disease. During the procedure of such treatment it is required to take consideration of *Avedhya Sira* which should not be punctured during *Sira vedhan*.

As mentioned above the total number of *Avedhya sira* is 98, these are divided in three regions as mentioned in **Figure 1**. *Sushrutacharya* in *Sharirasthan* of *Rachana Sharir* mentioned information about the *Siras* of human body. Here he has defined *Avedhya Siras* which should not be punctured for therapeutic purpose.^[4-7]

Figure 1: Number of *Avedhya sira* in different region.

Shakha, *Koshtha* and *Jatrurdhwa* are major regions of body in which these veins are distributed. This distribution of *Vedhya Sira* and *Avedhya Sira* in various region of body are as follows:

1. Region: Shakha

- ✓ *Vedhya Sira*: 384
- ✓ *Avedhya Sira*: 16

2. Region: Koshtha

- ✓ *Vedhya Sira*: 104
- ✓ *Avedhya Sira*: 32

3. Region: Jatrurdhwa

- ✓ *Vedhya Sira*: 114
- ✓ *Avedhya Sira*: 50

Avedhya sira are associated with particular anatomical structure, as mentioned above out of 98 *Avedhya sira*s 16 are found in extramities, thirty two in *Koshtha* and fifty in *Urdhvjatrugata*. The overall distribution of *Avedhya sira*s and possible complications while punctured is mentioned in **Table 1.**^[7-10]

Table 1: Distribution and Associated complications on puncturing of *avedhya sira*.

Region	Vein Considered	Potential Complications
Extremities	Total: 16	
- Jaldhara	Cephalic vein (upper limb), Great saphenous vein (lower limb)	Severe blood loss, draining blood from dorsal venous arch
- Two Urvi	Brachial vessels (upper limbs), Femoral vessels (lower limbs)	Severe blood loss, potential fatality
- Lohitaksh	Axillary vessels (upper limbs), Profunda femoris and deep branches of femoral artery (lower limbs)	Severe blood loss, "Lohitkshayen marnam"
Kostha (Abdomen)	Total: 32	
- Two Vitap	Testicular/Ovarian vessels, vessels of the gonads	Necrosis of gonads
- Two Katiktaran	Gluteal vessels	Necrosis of gluteus muscles
- Parshav (Sides)	Vessels from lateral side, Parshavsandhigata (junction of abdomen and thorax)	Severe blood loss, poor drainage
- Pristh (Back)	Subscapular vessels	Nerve injury, paralysis
- Udar (Abdomen)	Epigastric vessels	Severe blood loss
- Vaksh (Thorax)	Coronary vessels, internal mammary vessels, intercostal vessels, lateral thoracic vessels	Adverse effects on the heart
Urdhvjatrugata (Head and Neck)	Total: 50	
- Marma Sangya	Internal and external carotid arteries, jugular veins	Close to the heart, vital body components, severe complications
- Krikatika	Occipital vessels	Severe complications
- Vidhur	Post-auricular arteries and veins	Severe complications
- Sandhidhamanyau	Internal maxillary vessels	Manyastambh (neck stiffness), severe complications
- Rasvahe, Vagvahe	Profunda linguae vessels	Necrosis of the tongue
- Aupnasikaschya	Angular artery and veins	Severe blood loss in Little's area
- Apangyorekek	Zygomaticotemporal artery	Vision loss, complications
- Sabdvahini	Posterior auricular and tympanic vessels	Delicate organ complications
- Kesanugataschya	Supraorbital and frontal branch of superficial vessels	Superficial, severe complications
- Aavart	Frontal branch of superficial vessels	Sensitive area, severe complications
- Sthpnyam	Nasal branch of frontal veins	Sensitive area, severe complications
- Utkshap	Parietal branch of superficial temporal	Poor scalp drainage
- Simant, Adhipati	Occipital and superficial temporal veins	Poor scalp drainage

1. Upper extremity: *Jaldhara* is identified as the cephalic vein in the upper limb and the great saphenous vein in the lower limb. Puncturing these

veins can cause severe blood loss due to their role in draining blood from the dorsal venous arch.

2. **Lower extremities:** The great saphenous vein, being a continuation of the dorsal venous plexuses, if punctured, can result in severe blood loss and harmful conditions.
3. **Urvi:** Comprising the brachial and femoral veins, puncturing these can lead to severe blood loss and potential fatality.
4. **Lohitaksh:** The axillary vein and profunda femoris vessels are crucial, and puncturing them can lead to severe blood loss, as noted in the *Sushrut Samhita*.
5. **Vitap and Katiktaran:** Veins serving the gonads and gluteal region, puncturing these can cause necrosis of the gonads and gluteus muscles.
6. **Vrihiti:** Identified as the subscapular vessel, puncturing this can cause nerve injury, paralysis, and blood loss.
7. **Aplap, Apsthamb, Stanmul, Stanrohit:** These veins near the heart, including coronary vessels and intercostal vessels, if punctured, can have adverse effects on the heart.
8. **Marma sangya:** Comprising internal and external carotid arteries and jugular veins, these veins are close to the heart and vital body components, making them contraindicated for venesection.
9. **Sandhidhamanyau:** Internal maxillary vessels, if punctured, can lead to *Manyastambh* (neck stiffness) due to insufficient blood in the jaw.
10. **Rasvahe, Vagvahe:** Identified as the profunda linguae vessels, puncturing these can lead to necrosis of the tongue.
11. **Aupnasikaschya:** Comprising the angular artery and veins, puncturing these can cause severe blood loss in Little's area.
12. **Apangyorekek:** The zygomaticotemporal artery, if punctured, can cause vision loss or other complications.
13. **Sabdvahini:** Posterior auricular and tympanic vessels, puncturing these can affect delicate organs.
14. **Kesanugataschya:** Supraorbital and frontal branch of superficial vessels, being more superficial, are contraindicated for venesection.
15. **Aavart and Sthpnyam:** Frontal branch of superficial vessels and nasal branch of frontal veins, puncturing these sensitive parts can cause severe complications.
16. **Utkshap, Simant, Adhipati:** Parietal branch of superficial temporal, occipital and superficial temporal veins, puncturing these can cause poor scalp drainage.

Avedhya sira should not be punctured due to the risk of severe blood loss and associated complications, puncturing these veins, such as the dorsal venous plexuses, can lead to fatal outcomes.^[9-11]

CONCLUSION

Ayurvedic learners described *Sira* in the *Sharir Sthana* and *Sarnat Sira* in *Sutra Sthan*. *Sira* are four types; *Aruna*, *Neela*, *Shweta*, and *Lohita*, corresponding to *Vata Doshas*, *Pitta Doshas*, *Kapha Doshas* and *Rakta*, respectively. *Siravedhan*, is a practice used in various

diseases; in this context different sites have been identified for the purpose of *Siravedhan* and concept of *Avedhya Sira* elaborated. *Avedhya Sira* are vein where puncturing is prohibited since puncturing such vein may lead complications. Damage to *Avedhya Sira* can even cause death in some particular cases. There are 98 *Avedhya Sira* amongst the total 700 *Sira* of human body. These *Avedhya Sira* divided into different regions; *Shakhagat*, *Koshthagata* and *Urdhwajatrugat*. The number of *Shakhagat Avedhya Sira* is 16, *Koshthagata Avedhya Sira* are 32 in number while there are 50 *Urdhwajatrugat Avedhya Sira* identified in human body. In the upper limb, the *Avedhya Sira* includes *Jaaldhara*, *Urvi* and *Lohitaksha*. Saphenous vein, femoral artery and femoral vein identified in the lower limb. *Avedhya Sira* are deep vessels, therefore should not be punctured to prevent harmful effects if punctured. It is crucial to avoid puncturing of these *Avedhya Siras* while performing *Siravedhan*.

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