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Review Article

A Conceptual Study of *Sira* in the Context of *Siravedhana* - A Review Article

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ABSTRACT

Siravedhana is a very important *Ayurvedic* therapeutic procedure for various diseases involving *Rakta* and *Pitta Dushti* but in present era it is not commonly practiced because the anatomical structure of the *Sira* for *Vedhana* is conspicuous. *Siravedhana* procedure is very elaborately defined in *Sushruta Samhita*. In this article scholar has define the structure of the *Sira* in the perspective of *Siravedhana* with the help of the classical explanation. As the description is indicating that *Sira* is a hollow tubular structure conveying blood it means that Nerves cannot be the *Sira*, the structure of *Sira* is either an artery or a vein. Further in the *Samyakvedhana lakshana Acharya Sushruta* has said that the blood flow due to the puncturing of a *Sira* should stop automatically by minimal efforts this criteria cannot be fulfilled by the arteries as the blood pressure is higher in them, means the *Sira* should be the veins. Lastly *Acharya* has described the *Sirayantrana vidhi* before performing the procedure to engorge the *Sira*. This *Sirayantrana* procedure is not logically for the deep veins means the *Sira* is being used in the *Siravedhana* procedure must be a superficial vein. Thus finally the anatomical structure of the *Sira* in the context of *Siravedhana* is indicative of superficial veins.

Key words: *Siravedhana, Sira, Sirayantrana vidhi*, superficial veins.

INTRODUCTION

Siravedhana is a very important *Ayurverdic* therapeutic procedure for various diseases involving *Rakta* and *Pitta Dushti*, but in present era it is not commonly practiced. One most common cause for the above situation is the anatomy of *Sira* itself. As a manual of anatomy and surgery *Sushruta Samhita* gives the surgical principals and methodology of surgery. In *Sushruta Samhita* the word *Sira* is used for various structures like vein, artery, and nerve.

In this article anatomy of *Sira* will be defined as superficial vein in the context of *Siravedhana*.

Objectives of the study

- To define and establish the anatomical structure of the *Sira* in the context of *Siravedhana*.

MATERIALS AND METHODS

- Review of Samhitas regarding the structure of *Sira.*
- Review of modern Anatomy.

SYNONYMS OF *SIRA*

According to *Acharya Charaka* channels, veins, arteries, ducts, capillaries, tubes, passages, tracts, lacunae, glands (open or closed), bladder, repertories and resorts all these words are use for the visible and invisible spaces which recur in the body elements. [1] According to *Acharya Sushruta*

in the body the organs having *"Avakas"* are called *Sira, Srotas, Marga, Dhamani*. [2]

DEFINITION OF *SIRA*

According to *Acharya Charaka Sira* are the channels in which the fluid (the blood etc) is conducted (*Sarana*) from one place to another. [3] *Acharya Chakrapani* has also commented that the channels are called *Sira* because of "*Sarana" or "Sthanantara Gamana"* (moving from one place to another). [3] By explaining the characteristics of the *Sira Acharya Sushruta* has said that they are unsteady by nature and change their position like fish. [4]

DISCUSSION

The description of *Sira* as an anatomical entity can be found in the hymns of *Vedas*. In *Atharva Veda* there is explanation related to hundreds of *Siras* which are coppery red in colour conveying *Ashuddha Rakta* this indicates about venous system which conveys deoxygenated blood.

In the classics *Acharyas* have described different synonyms and definitions of the *Sira.* Synonyms are given on the basis of similarity of structure and characters it doesn't mean that all structures are totally same. It is a method by which *Acharya* used to describe the characters of some structure.

There are various synonyms of *Sira* according to different *Acharyas,* which denotes the characteristics of *Sira* as under.

- Nadi-*Sira* is a tubular structure as *Nadi*.
- *Strotas*-Some *Sira* have fenestration in it as *Strotasa*.
- *Dhamni-Sira* also contains blood as *Dhamni*.
- *Snayu*- The origin of *Snayu* and *Sira's is* same.
- *Vasa- Snayu* is derived from *Meda* and *Vasa* are a one type of *Meda.*
- *Tantuki*- Some *Sira* are very minute.

Acharya stated that the meaning of any word or sentence should be studied in the context of that idea. [5] The description of *Acharya Charaka* about *Sira* indicates the classification of the hollow tubular structure of body. All the structures which convey body fluids from one body part to other are called *Sira*. Then he further describes that out of them in which tubular structure blood is flowing with *Dhaman* (pumping) are called *Dhamni* and the structures in which *Stravana* (oozing) process occurs are called *Srotasa*. According to the definition of *Acharya Sushruta Sira* change their location as like the fish and is slippery in its nature. Means *Sira* is anatomically most variable structure in the body. In circulatory system systemic veins are more variable than arteries, [6] which denote that Acharya *Susruta* has given description of the superficial veins.

As in the different context the same word has different meaning so we discussed the structure of the *Sira* in the context of the *Siravedhana*.

Raktamokshana is a procedure through which vitiated blood is withdrawn from the body; *Siravedhana* is a method of *Raktamokshana.* This indicates that the structure which is to be punctured in this procedure must convey blood and bleeding should be stopped by minimal efforts after the procedure. [7] *Acharya* has also described the *Sira-Yantrana Vidhi* [8] before procedure which indicates the process of applying proper tourniquet.

As in the body only arteries and veins can bleed after puncturing so the structure of *Sira* should be either a vein or an artery. But if artery is to be punctured the blood flow will not stop automatically [9] and there is no such logic in tying tourniquet while puncturing arteries as they are deeply seated.

The structure must be the superficial veins as their blood flow can stop automatically after puncturing and for their assessment tourniquet application is logical. As they get engorged and are easy to asses for puncturing perfectly without complications. So here in the context of *Siravedhana* the structure which should be use for the procedure is a superficial vein.

CONCLUSION

From above discussion following conclusion can be drawn.

- The *Sira* is a tubular structure means *Sira* may be a vein, artery or nerve.
- In *Siravedhana* procedure *Rakta* is drawn from the *Sira* means the structure of *Sira* is different from nerve.
- The blood flow of the artery can't stop automatically so it can't be a *Sira*.
- The *Sirayantrana Vidhi* is not logically for the deep seated veins.
- All the above mentioned criteria are fulfilled by the superficial veins so in the context of *Siravedhana* the *Sira* is a superficial vein.

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