



COMPARATIVE STUDY OF SIRA AND DHAMANI SHARIR

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ABSTRACT –

Sira, Dhamani and Srotas Sharir is basically Ayurvedic concept which deals with the study Ayurvedic aspects interms of Rachana Sharir related with these three structures. According to Ayurved, minute structural difference is present in between sira, dhamani and srotas. More or less functionally these three structures are differentiable with their contents which they carry. Primarily, all 3 are tube like structures which carries respective material within them. Acharya Sushrut established novel opinion of Rachana Sharir (Anatomy- Framework) and Shalya Tantra (Surgery). He has explained various discernment in Rachana Sharir in the Sushrut Sharirsthan. In 7th adhyaya of the Sharirsthan, he has given the in depth information on the topic of the Siras of the human body (Sharir). In the similar adhyaya the Acharya Sushrut has named some Avedhya Siras which must not be punctured during the treatment phase. Dhamnis are also tube or cords like structure filled with Vata dosha, and having pulsations are called as dhamani. The walls of dhamanis are not collapsible due to pulsations. There are 700 siras and 24 dhamanis are mentioned by the acharyas which are again gets distributed further. This comparative study of sira and dhamani is helpful in understanding the difference between the sira, dhamani and also srotas with the help of anatomy.

KEY WORDS – Sira, Dhamani, Avedhya sira, comparative study.

INTRODUCTION –

Sira is the tube like hollow structure which does the function of Saran – Vahan (Circulation, Transportation) of liquid material only (Blood, Fluid, Lymph, Juice, Secretions etc). In this aspect, the structure Sira includes arteries, veins, lymphatics, capillaries, nerve and duct also.

Broadly speaking, sira is considered as vessels in many references. It is also considered as only Veins in some instances.

SIRA SANKHYA (NUMBER OF SIRA) –

According to Sushrut Sharirsthan 7th chapter,

Total numbers of siras are 700 which all are originated from Nabhi (Umbilicus). Here, Sushrutacharya has given 700 sira by considering vein, artery, lymph vessels and nadi (nerve). Also, he has mentioned the distribution of these 700 siras. Firstly, he gave the concept of Moola Sira as 40 in number. Moola siras are categorized as,

- Vataavaha Sira - 10
- Pittavaha Sira - 10
- Kaphavaha Sira - 10
- Raktavaha Sira - 10

Second classification of siras is,

- Vataavaha Sira -175
- Pittavaha Sira -175
- Kaphavaha Sira -175
- Raktavaha Sira -175
- Total siras – 700
- These 700 siras are distributed as,
- In extremities (100 x 4 – 400 siras)
- In Trunk (34 x 4 – 136 siras)
- In Head, Neck (41 x 4 - 164 siras)

MODERN CORRELATION OF SIRAS -

⊙ **Vataavaha Sira** –

Nerves - Motor and Sensory nerves, Spinal nerves helps in sensation.

⊙ **Pittavaha Sira** –

Ducts – Bile, Pancreatic etc transportation of digestive juices

⊙ **Kaphavaha Sira** –

Lymph Vessels – Lymphatic circulation.

⊙ **Raktavaha Sira** –

Artery + Vein + Capillary – Blood Circulation.

TYPES OF SIRA- (SIRA PRAKAR) -

First type is as per functional quality,

- Vataavaha Sira
- Pittavaha Sira
- Kaphavaha Sira
- Raktavaha Sira
- Second classification is according to material they carries within themselves,
- **Tamra sira** – Arteries – Red – Pure Blood
- **Neela sira** – Veins – Blue/Black – Impure blood
- **Shweta sira** – Lymph vessels – White – Lymph

- **Aruna sira** – Capillaries – Not fix colour - Blood grain

AVEDHYA SIRA (VENESECTION) –

There are certain siras in the human body which should not be punctured those siras are called as avedhya siras. These are 98 in number as told by Sushrutacharya. These 98 siras are distributed as,

- ⊙ In Shakha pradesha (Extremities) - 16
- ⊙ In Koshtha pradesha (Trunk) – 32
- ⊙ In Jatrurdhwa pradesha (Head, Neck) - 50 ^{1,2 &3}

DHAMANI SHARIR -

Dhamnis are also tube or cords like structure filled with Vata dosha, and having pulsations are called as dhamani. The walls of dhamanis are not collapsible due to pulsations. There are 2 meanings of dhamani as,

- ⊙ Pulsation – Arteries as veins don't have pulsations.
- ⊙ Carries Vata dosha i.e. impulses, sensations relates with Nerves or Nervous system.
- ⊙ In another perspective, these are responsible for different movements of muscles through nerve sensation and it needs pulsation i.e. blood supply for response / movement / action.
- ⊙ So the structure Dhamani as its nirukri indicates can be considered as Artery and Nerve.
- ⊙ But in general and practical perspective, one should correlate with Arteries only because dhamanis are having pulsations and due to the blood supply any structure in the human body gets structurally and functionally active. So according to Ayurvedic Physiology, along with the oxygenated blood i.e. Rakta, dhamanis also carries Vata dosha.

1. DHAMANI SANKHY AND PRAKAR (NUMBER AND TYPES OF DHAMANI) -

Dhamani Sankhya – (Number)

24 dhamanis originated from Nabhi (Umbilicus).

Here Sushrutacharya has considered Dhamanis as only Arteries while describing dhamani sankhya.

Dhamani Prakar – (Types)

Urdhwagami Dhamani – 10

Adhogami Dhamani – 10

Teeryakagami Dhamani - 04

MODERN CORRELATION OF DHAMANI -

- ⊙ Urdhwagami Dhamani – Arch of Aorta with its Branches
- ⊙ Adhogami Dhamani – Abdominal Aorta with its Branches
- ⊙ Teeryakagami Dhamani – Cutaneous Arteries

⊙ Urdhwagami Dhamani –

1. Arch of Aorta
2. Right Brachiocephalic Trunk
3. Right Common Carotid Artery
4. Right Subclavian Artery
5. Left Common Carotid Artery
6. Left External Carotid Artery
7. Left Internal Carotid Artery
8. Right External Carotid Artery
9. Right Internal Carotid Artery
10. Left Subclavian Artery

⊙ Adhogami Dhamani –

1. Coeliac Trunk
 2. Superior Mesentric Artery
 3. Inferior Mesentric Artery
 4. Gonadal Artery
 5. Renal Artery
 6. Right common illiac artery
 7. Left common illiac artery
 8. External illiac artery
 9. Internal illiac artery
 10. Median sacral artery
- © **Teeryakgami Dhamani** -
Cutaneous Arteries ⁴

DISCUSSION –

Sira, Dhamani and Srotas Sharir is basically Ayurvedic concept which deals with the study Ayurvedic aspects interms of Rachana Sharir related with these three structures. According to Ayurved, minute structural difference is present in between sira, dhamani and srotas. More or less functionally these three structures are differentiable with their contents which they carry. Primarily, all 3 are tube like structures which carries respective material within them. Aacharya Sushrut established novel opinion of Rachana Sharir (Anatomy- Framework) and Shalya Tantra (Surgery). Sira is the tube like hollow structure which does the function of Saran – Vahan (Circulation, Transportation) of liquid material only (Blood, Fluid, Lymph, Juice, Secretions etc). In this aspect, the structure Sira includes arteries, veins, lymphatics, capillaries, nerve and duct also. Broadly speaking, sira is considered as vessels in many references. It is also considered as only Veins in some instances. Dhamanis are also tube or cords like structure filled with Vata dosha, and having pulsations are called as dhamani. The walls of dhamanis are not collapsible due to pulsations. But in general and practical perspective, one should correlate with Arteries only because dhamanis are having pulsations and due to the blood supply any structure in the human body gets structurally and functionally active. Sira are 700 in number and dhamanis are 24 with their respective types.

CONCLUSION –

Broadly speaking, sira is considered as vessels in many references. It is also considered as only Veins in some instances. the structure Dhamani as its nirukri indicates can be considered as Artery and Nerve. But in general and practical perspective, one should correlate with Arteries only because dhamanis are having pulsations and due to the blood supply any structure in the human body gets structurally and functionally active. So according to Ayurvedic Physiology, along with the oxygenated blood i.e. Rakta, dhamanis also carries Vata dosha. This comparative study of sira and dhamani is helpful in understanding the difference between the sira, dhamani and also srotas with the help of anatomy.

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