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A CRITICAL STUDY AND ANATOMICAL REVIEW OF ARTAVAVAHA SROTAS W.S.R. TO ITS VIDDA LAKSHAN

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ABSTRACT

In Ayurveda, *Srotas* constitutes the fundamental units governing structural and functional aspects of the body. These intricate channels, elucidated by Acharya Charaka and Acharya Sushruta, are crucial for physiological movement and transformation. Among them, *Artavavaha Srotas*, also known as *Yogawahi Srotas*, holds paramount importance, closely resembling the female reproductive system in modern medicine. As described by Acharya Sushruta, *Artavavaha Srotas* comprises two channels, with their origins in *Garbhashaya* and *Artavavahi Dhamanyas*. Trauma or imbalance within this system can manifest as *Bhandhayatva* (infertility), *Artavanasha* (amenorrhea), and *Maithuna Asahishnuta* (dyspareunia). This study offers a comprehensive exploration of the Ayurvedic concept of *Artavavaha Srotas*, juxtaposed with a discussion on its pathophysiological and clinical perspectives, aligning with modern scientific understanding. By bridging ancient wisdom with contemporary insights, this research aims to offer a holistic framework for understanding and managing reproductive health disorders.

Keywords: *Artavavaha Srotas, Moolasthanas, Bandhyatva, Maithuna Asahishnuta, Artavanasha*

INTRODUCTION

The principles of Ayurveda are comparable to a tree's roots, with *Srotas* being one of them. The first medical system to acknowledge and explain the existence of the millions of channels that make up the human body was Ayurveda. They referred to the body's canals, ducts, or transit systems as *Srotas*. The *Srotas* help to keep the various tissues and organs in communication with one another. The body is disease-free as long as these circulatory pathways carry out their regular tasks. When there is an inappropriate flow or communication through the channels, disease develops.

There are two different kinds of *Srotas*: *Antarmukha Srotas*, which opens inside the body, and *Bahirmukha Srotas*, which opens outside the body and has nine male and twelve female openings. There are twenty-two *Antarmukha Srotas* in all, with each one being explained by Acharya Sushruta in pairs.

Another "*Artavavaha Srotas*" was mentioned by Acharya Sushruta. When talking about the *Srotas* in *VimanaSthana*, Acharya Charaka did not include the *Artavavaha Srotas* in his list of *Srotas*. The Thirty Chapter of *ChikitsaSthana* contains several references to the *RajovahiSiras* by Acharya Charaka. However, only the *Artavavaha srotas* are represented by these *Rajovahi Siras*. Therefore, Acharya Charaka

has explained thirteen *Antarmukha Srotas* in total.

Acharya Sushruta states that there are two *Artavavaha Storas*, and that *Garbhashaya* and *Artavavahi Dhamanya* are their respective *Moolasthanas* [1]. The uterus, or *garbhashaya*, is the storage space for *artava*, or menstrual blood, in the endometrium until the day of menstruation. Also referred to as *yogvahi srotas* or *antarmukhsrotas*, *artavavaha srotas*. Menstrual blood is referred to here as *Artava*, and the portion of the female reproductive system that is in charge of creating menstrual blood and the passageways that convey it during the monthly cycle is known as *Artavavaha Srotas*. *Artavavahi Srotas* may refer to the fallopian tubes and uterus blood veins and capillaries.

The uterus is a hollow, muscular organ situated in the female pelvis between the bladder and the rectum, according to modern science. The ovum that passes through the fallopian tubes is produced by the ovaries. After emerging from the ovary, the ovum might fertilize and settle into the uterine lining. This pear-shaped organ is essential to pregnancy, fertility, and menstruation.

Acharya Sushruta states that damage to *Artavavaha Srotas* causes *Bandhytwa* (infertility), *Maithuna Asahishunta*

(Dyspareunia), and *Artava Naasha* (amenorrhea) [2].

AIM AND OBJECTIVES

1. Conceptual analysis of the *Moolsthana* of the *Artavavaha Srotas*.
2. A comparative analysis of *Artavavaha Srotas* and its *Viddha Lakshan* from a contemporary perspective.

ETYMOLOGY OF SROTAS

The word *Srotas* is derived from the Sanskrit *Dhatu-* “*sru*”. Meaning of “*sru*” is to secrete, to permeate to flow. The structure through which substance is either secreted or circulated or transported is called as *Srotas* [3].

DEFINITION OF SROTAS

Acharya Sushruta defines *Srotas* as the hollow channel, with the exception of *Sira* and *Dhamani*, which originate in the root space and go throughout the body carrying certain beings [4].

Acharya Charaka says that *Srotas* is the channel through which the materials flow in the body, or from which *Sravana*, or flow of body substances, occurs [5].

TYPES OF SROTAS

1. *Bahir Mukha Srotas* – External openings
2. *Antar Mukha Srotas* – Internal channels of the body

• BAHIR MUKHA SROTAS

Bahir Mukha Srotas are those which have their openings on the outside of the

body. According to Acharya Sushruta, Ears, eyes, mouth, nostrils, anus and penis are nine outward openings in males. In females however there are three additional openings i.e. two in breasts and one below vagina carrying the menstrual blood [6].

ANTAR MUKHA SROTAS

The channels known as *Antar Mukha Srotas* are those that are both internal to the body and have openings there. Another name for them is *Yogavahi Srotas*.

According to Acharya Sushruta there are eleven pairs of *Antar Mukha Srotas* - *Pranavaha*, *Annava*, *Udakavaha*, *Rasavaha*, *Raktavaha*, *Mamsavaha*, *Medovaha*, *Shukravaha*, *Mootravaha*, *Purishvaha*, *Artavavaha* [7].

Acharya Charak has mentioned fourteen *Antar Mukha Srotas*- *Pranavaha*, *Annava*, *Udakavaha*, *Rasavaha*, *Raktavaha*, *Mamsavaha*, *Medovaha*, *Asthivaha*, *Majjavaha*, *Shukravaha*, *Mootravaha*, *Purishvaha*, *Swedavaha* [8].

Thirteen *Antar Mukha Srotas*, all except *Artavavaha Srotas*, are stated in Ashtanga Hridaya as they are in Charak Samhita. The *Srotas* is in a healthy state if it flows organically. When bad food and activity cause the *Srotas* to become unbalanced or obstructed, disease sets in [9].

ARTAVAVAHA SROTAS AND ITS MOOLASTHANA

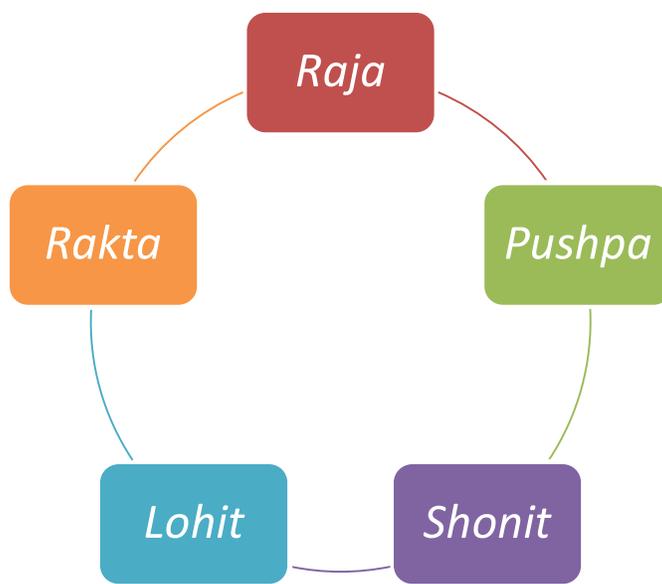
There are two *Artavavaha Srotas* according to Acharya Sushruta, and their *Moolasthana*

is referred to as *Garbhashaya* and *Artavavahi Dhamanya*.

The uterus, or *garbhashaya*, is the storage space for *artava*, or menstrual blood, in the endometrium until the day of menstruation. The term *Garbhashaya*, which is composed of the words *Garbha* and *Ashaya*, refers to the organ that contains the *Garbha*. It is located in the third *Avarta*, halfway between *Pittashaya* and *Pakvashaya* [10]. According to Acharya Vagbgata, Sushruta, and Bhavprakash, Yoni's three *Avarta*—of which *Garbhashaya* is a part—have a structure resembling that of a conch shell. It alludes to the *Rohita Matasya Mukha*-shaped uterine cavity [11]. The *Artavavaha Srotas*, or channels that convey menstrual blood (*Artava*) out of the body during the menstrual cycle, are described by Acharya Sushruta. According to his definition,

"*Artavavahe Dwe*" refers to the presence of *Artavavaha Srotas* in pairs, and their *Moola Sthana* are the uterus (*Garbhashaya*) and the uterine tube (*Artavavahi Dhamanya*); damage to these causes infertility (*Bandhyatva*), dyspareunia (*maithuna asahishnuta*, or intolerance to compulsion), and amenorrhea [12]. In the female pelvis, between the bladder and the rectum, is a hollow muscular organ known as the uterus, according to contemporary science [13]. An ovum passes through the fallopian tubes after being produced by the ovaries. Once extracted from the ovary, the ovum can be fertilized and allowed to settle into the uterine lining. Pregnancy, fertility, and menstruation are all significantly impacted by this pear-shaped organ.

SYNONYMS [14]



ARTAVAVAHA SROTAS VIDDDHA LAKSHAN

Acharya Sushruta states that symptoms of amenorrhea, sexual intolerance, and infertility are caused by damage on the *Artavavaha srotas*. *Abhighata* also vitiates *Vayu*. This means that in *Artavavaha srotas*, vitiated *vayu* again results in *sanga* and *dhatu Kshyatmaka sthiti*, which is then followed by *artavanasha* (anovulation) [15]. *Artavavaha Srotas* which are similar to the structures of the female reproductive system. The brief explanation of *Artavavaha srotas* found in the old classics is as follows.

1)SHRONI

The region below *Urusandhi* and above *Smarmandira* is referred to as *Shroni*. Femur head and pelvic bone junction is referred to as *urusandhi*. A straight line drawn between these two joints will cross the clitoris by a small amount. This area is rather broad in women because a significant amount of subcutaneous fat is formed above these joints [16].

2)BHAGA

There are twelve Angulas in *Bhaga*. [17] than measuring the introitus of the vagina, the twelve Angulas measurement appears to describe the circumference of the complete vulva. This measurement of a woman's vaginal introitus is known as *Hastini*, and according to Acharya Dalhana, it resembles a *pipal* leaf. Its form resemblance to a *pipal* leaf may be the reason for its similarities.

The vulva is likewise somewhat triangular, with its base at the mons pubis and its peak midway between the vaginal introitus and anal orifice, with little convexity of its lateral walls. The leaf is triangular in shape with slightly convex lateral borders [18].

3)YONI

“*Yuj*” Dhatu means to join; in females, the term Yoni is used to join the exterior and internal genitalia [19]. Acharya Sushruta states that the uterus, or the bed of the foetus, is located in the third and uppermost *Avarta*, and that the yoni is shaped like a conch cell with three *Avarta* [20]. Regarding Yoni, there are a few more terms found in the classics that also relate to the various genital system sections, such as *Bhagvistra*, *Garbhachhidra*, *Garbhashaya* [21] and *Apatyapatha* [22]. Therefore, it can be said that the term "Yoni" refers to the full set of female genital organs. Acharya Dalhana and Acharya Indu have acknowledged *Garbhashaya* as distinct from three *Avartas*, which are supposed to be located in *Garbhamarga* (the vaginal canal) [23].

4)GARBHASAYA

Garbha and *Ashaya* are the two words that make up the word *Garbhashaya*. *Ashaya* translates to "the place to rest." As a result, the term "*Garbhashaya*" refers to the area where the fetus is growing or lies [24]. Located in the third *Avarta* of Yoni, behind the bladder, between the *Pittashya* and *Pakwashya*, or between several coils of

intestine wrapped in Jarayu (Peritoneum), is *Ashaya* as *Garbhashya*. It resembles mouth of *Rohita Matsya*. Although *Dimbha* has been included in the Koshta structure by Acharya Vagbhata, Acharya Arundatta asserts that it is derived from the intestines and is composed of the essence of *Rakta* and *Mamsa* [25]. The shape of *Garbhashaya* is described as *Kshudratumbi Phala* in the Ayurveda Dipika commentary, with its mouth pointing downward and its form slightly flattened.

5) BEEJA GRANTHI

The component of the female genital organ called the ovary, or *beeja granthi*, is where the *beeja* is matured, stored, and eventually discharged. According to the description of the *Artavavaha srotas' viddha lakshana*, any anomalies or trauma to these *srotas* could result in *Vandhyatva*, *Maithunasahatva*, and *Artavanasha*. The two primary symptoms that deal with the function of the ovaries are *Artavanasha* and *Vandhyatva*. Acharya Sushruta has confided to prevent harm to eight essential parts in the chapter on *Ashmari* Acharya's therapy. Two *Phala srotas* are indicative of the ovaries among them. The term *Antargata Phala*, which directly relates to the ovary, appears in both Sushruta Sharir Sthana and Chikitsa Sthana [26].

6) ARTAVA

The name *Shonita* or *Rakta* refers to the *Artava*, which is red in color and fluid in

form. It is exclusively present in females in the *Updhatu* form [27]. It starts at age 12 and ends at age 50, with the exception of the puerperal and lactation periods, which last for three to seven days and are referred to as *artava*.

While Acharya Sushruta compared *Shuddhartava's* color to that of *Shasha Asrik* (rabbit blood) or *Laksha rasa* and mentioned the qualities that it should not stain the cloth after washing [28], Acharya Charaka explained that *Shuddhartava's* color should resemble that of the *Gunjaphala*, *Padmalakta* (red lotus flower), and *Indragopa* (an insect) [29].

Additionally, the Acharya Susruta describes the *Artava* in *Mukul* or bud form throughout childhood, which is *Avyaktavastha*. The *Artava* appears depending on time and age conditions [30].

DISCUSSION

Ayurveda is an integral component of our culture and civilization. "There is no end to Ayurveda (the science of life), hence one should devote himself to it constantly and without any negligence," according to the aforementioned remark. The significance of Acharya Sushruta's revelation of several anatomical details of *Artavavaha Srotas*, including its *Moolasthana* and *Viddha Laskhana*, justifies the appellation. His opinions on *Artavavaha Srotas* are insightful, noteworthy, and clear. The first medical system to acknowledge and explain

the existence of the millions of channels that make up the human body was Ayurveda. These bodily tubes, conduits, or transit systems were referred to as *Srotas*.

Acharya Sushruta and Acharya Vagbhata say that *Srotas* are like tiny canals that allow "*Rasadi Poshya Dhatu*" to flow throughout the body and nourish it. There are two different kinds of *Srotas*: *Antarmukha Srotas*, which opens inside the body, and *Bahirmukha Srotas*, which opens outside the body and has nine male and twelve female openings. There are twenty-two *Antarmukha Srotas* in all, with each one being explained by Acharya Sushruta in pairs. Another "*Artavavaha Srotas*" was mentioned by Acharya Sushruta.

The *Artavavaha Srotas*, which is exclusive to females, is the most important type of *Srotas*. "*Artavavahe Dwe*" says Acharya Sushruta. This indicates that there are two *Artavavaha Srotas* in the body. Thus, structures that occur in pairs within a body can be categorized as *Artavavaha Srotas*. The fallopian tube, uterine arteries, and ovaries are these organs. While all of these are significant in relation to the female genital organs, they fall short of providing a full understanding and functioning of the organs.

Because they secrete the ovum, which is crucial to the development of the fetus, the ovaries are the most vital component of the female genital organs. However, in a small

number of cases, it has been observed that issues with the ovaries, such as polycystic ovarian disease, might interfere with a woman's menstrual cycle, although other *Artavavaha Srotas*, such as *Maithuna Asahishnuta* (dyspareunia), don't show up. Thus, an ovary by itself cannot be described as *Artavavaha Srotas*.

The fallopian tubes are responsible for transporting the ovum from the ovary to the uterus. It is a significant location for fertilization as well. However, when we talk about the *Viddha Lakshana* of *Artavavaha Srotas*, the sole symptom that results from fallopian tube ligation is *bandhyatwa*. The fallopian tubes play no part in the other two symptoms.

The uterine arteries carry out the role of *Poshana*, which is to deliver nourishment to every organ in the female reproductive system. The female genital system continues to operate normally even after a ligation or tubectomy is done on a female body.

The *Moolasthan* of *Artavavaha Srotas* is considered as *Garbhashaya* (Uterus) and *Artavavaha Dhamanis* (Vessels carrying *Artava*).

Within *Garbhashaya*, the term *Ashaya* denotes a cavity or space within that specific organ, which are important functional regions or cavities within the body. Instead of referring to a single organ, the term "*Garbhashaya*" refers to the hollow area in the body where several biophysiological

processes take place and aid in the implantation and growth of the *Garbha* (foetus).

The term "*Dhamana*" (which means to contract) can be understood as the fallopian tube, which contracts to carry the ovum towards the uterus during the monthly phase and the ovarian and uterine vessels. In this study, the fallopian tube contracts to conduct the ovum, making it function similarly to an *Artavavaha Dhamani*.

Injury to *Artavavaha Srotas* leads to *Bandhytwa* (Infertility), *Maithuna Asahishunta* (Dyspareunia) and *Artava Naasha* (Amenorrhoea).

The clinical aspects of *Artavavaha Srotas's* injury now include *bandhytwa*. Modern medical science defines infertility as the inability to conceive by a mature couple who had regular, adequate coitus during the menstrual cycle for at least a year. It arises because one or both of the partners are at fault.

Dyspareunia, or *Maithuna Asahishunta*, has been identified as *Artavavaha Srotas's* second clinical characteristic. Dyspareunia is the term used to describe unpleasant or painful coital acts.

Amenorrhoea, or *Artava Naasha*, has been identified as the third clinical characteristic of *Artavavaha Srotas's* damage. *Artava Naasha* is the destruction or non-appearance of *Artava*.

CONCLUSION

The female reproductive system is represented by a number of structures that make up the *Artavavaha Srotas*. According to Acharya Sushruta, females have *Artavavaha Srotas*. As *Artavavaha Srotas* derives from *Garbhashaya* and *Artavavahi Dhamanya*, it can be equated to the female reproductive system. Here, the uterus is represented by *Garbhashaya*, and the uterine tubes, or *Artavavahi Dhamanis*, are the arteries that contribute to the monthly process and the replacement of uterine blood. The processes of fertilization, implantation, nourishment, and fetal growth occur in *Garbhashaya* and *Artavavahi Dhamani*. Injuries to the *Artavavaha Srotas* and its underlying causes might result in symptoms including irregular menstruation, dyspareunia, and infertility. Modern medicine accepts all of these and provides a thorough description of them. The hypothalamus-pituitary-ovarian axis regulates several hormones that affect reproductive system functions such as ovulation, menstruation, conception, endometrial alterations, etc. Additionally, the correct blood and nerve supply of the reproductive system has a role in some reproductive system processes. Additionally important to nutrition, development, and the healthy operation of the entire system is the capillary network found in the reproductive system.

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