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## Physio-Pathological understanding of Aartavavaha Srotas

Dr. Ashwini Honagannavar, Dr. Pratibha Kulkarni<sup>2</sup>

<sup>1</sup>Post Graduate Scholar, <sup>2</sup>Professor, Department of Kriya Sharira, Sri Dharmasthala Manjunatheshwar College of Ayurveda and Hospital, Hassan, Karnataka, INDIA.

### ABSTRACT

In Ayurveda, the concept of Srotas has been propagated very specifically. Srotas have a significant role in maintenance of equilibrium of body elements. Among types of Srotas, Aartavavaha Srotas is given prime importance which is only present in females. Aartavavaha Srotas are the channels which carry Aartava. Aartava can be considered as Bijarupia Aartava and Drusta Aartava i.e. ovum and menstrual blood respectively. The root of Artavavaha Srotas are Garbhashaya (Uterus) and Artavavaha Dhamani (vessels carrying Artava). Garbhashaya can be compare with uterus, that help for development of fetus. Dhamani can be compared with arteries i.e. ovarian arteries responsible for formation of Aartava (ovum) and Uterine arteries responsible for flow of Aartava (menstrual blood). Pathological changes occurs in the body due to Sroto Dushti, Sroto Sanga etc. so if any Viddha (injury) occurs to Aartava Vaha Srotas that leads to Viddha Lakshana i.e. Vandhyatwa, Maithunaasahishnutaa, Aartava Naasha.

Key words: Aartava, Srotas, Aartavavaha Srotas, Viddha Lakshana.

#### **INTRODUCTION**

Srotas (body channel) are the basic entities of the body, responsible for the Vahana (transfering ) of Dosha, Dhatu etc. [1] Body is considered as Srotomaya i.e. innumerable in number. [2] Srotas are the pathway in the body in which physiology and pathology depends. Srotas which may carry the Aartava is called as Aartavavaha Srotas. Rutu, Kshetra, Ambu, Beeja are primary factors for the Garbhotpadana. [3] Beeja refers to Aartava, it is an important entity in female reproductive age, which is responsible for the

#### Address for correspondence:

#### Dr. Ashwini Honagannavar

Post Garduate Scholar, Department of Kriya Sharira, Sri Dharmasthala Manjunatheshwar College of Ayurveda and Hospital, Hassan, Karnataka, India. E-mail: ashwinihngnvr@gmail.com

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formation of Garbha.[4]

#### **S**ROTAS

Srotas derived from sanskrit root "Srugatau". The Srotas are structures, which originate from its Moolasthana and it does the transportation of Abhivahanasheela Dravyas. [5] Srotas attains the colour of the *Dhatu* in which they circulate and structural aspect of these are circular, big, small, long in nature. [6] Srotas helps for mainly transformation and transportation of Dhatu.<sup>[7]</sup>

#### **Types:**

Bahya: Male - 9, Female - 12

Abhyantara: 11 pairs (Sushruta), 13 (Charaka)

#### Karana and Lakshana

When women consume food, having equal quality of Dosha and opposite quality of Dhatu then it leads to Srotopradushaka, that produce Srotodusti Lakshana like Atipravrutti, Sanga, Siragranti, Vimargagamana. [8]

#### Aartava

Shuddha Shonita (ovum) is Aartava, produced in Rutukala (proliferative stage). [9] As how Shukra is

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formed in one month in the same way *Aartava* is formed.<sup>[10]</sup> *Aartava* has similar properties like *Rakta*.<sup>[11]</sup> It combines with *Shukra* and helps for the fertilization process as well as growth and development of the *Garbha*. *Aartava* is an entity of body, it flows out through the *Yoni*, by the action of *Vata*.<sup>[12]</sup> It is having synonyms like *Shonita*, *Asrik*, *Maasikasrava*, *Rutu* etc. Its *Pramana* (quantity) is four *Anjali*.<sup>[13]</sup> *Aartava* is predominant of *Agni Mahabhuta*.<sup>[14]</sup>

#### **Qualities of Aartava**

Normal *Aartava* flows without *Piccha* (sliminess), *Daha* (burning sensation), *Arti* (pain) i.e. normal *Aartava* which has equilibrium of *Dosha* will not have these three properties. It flows out 3 to 5 days, quantity is neither too excessive nor too less. [15] *Aartava* appears like colour of *Gunjaphala*, *Padma Sannibha* (colour of the lotus petals, colour of insect *Indragopa*, colour of *Shashaasrak* (blood of rabbit), *Laksharasop* (colour of resin of laksha), *Yadvasonaviranjayet* (not stains to cloth). [16],[17]

#### Srava Kaala

Different Acharyas coated different Sravakaala of Aartava as below;

3 days	5 days	7 days
B . P. (Pu. Kh. Garbha 2/204), A. S. (Sā. 1/10); A. H. (Sā. 1/7	Cha. Chi. (30/225)	H. S. (Sashthasthana 1/9)

#### Aartava Dushti Lakshana

When *Aartava* gets *Vruddhi*, it produces symptoms like *Atipravrutti* (excessive flow of *Aarthava*), *Angamarda* (Body pain), *Daurgandya* (Bad smell). When *Aarthava* gets *Kshaya* then it produces symptoms like *Yatochita Kaala Adarshana* (occurs at improper time), *Alpata* (less quantity), *Yonivedana* (vaginal pain). [19]

#### Artavavaha Srotas

A channel which carry the *Aartava* is called as *Aartava Srotas*. It is having two *Moolasthana* i.e. *Garbhashaya* 

(uterus) and *Aartavavaha Dhamani* (arteries).<sup>[20]</sup> *Kshetra* is a consider as *Garbhashaya*.<sup>[21]</sup> Union of *Shukra* and *Aartava* forms *Garbha*. *Garbhashaya* gives *Aashraya* to *Garbha*. There are 4 *Aartava Vaha Dhamani* present in females.<sup>[22]</sup>

#### Aartava Vaha Sroto Viddha Lakshana

If any injury to *Aartavavaha Srotas* that leads to *Vandhyatwa, Maitunaasahishnuta, Aartava Nasha*.<sup>[23]</sup>

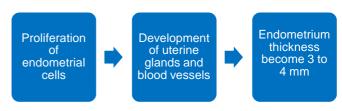
#### Physiology of female reproductive system

The main function of reproductive system is to ensures the continuation of species, transport of gametes, facilitate fertilization, regular menstruation and reproduction.

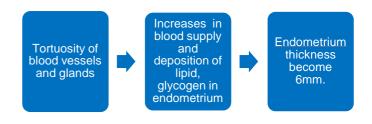
Uterus is mainly responsible for menstruation, implantation, gestation and also uterus has rapid growth and specialized contractile activity during pregnancy and parturition.

#### Role of uterus in Menstrual cycle

In proliferative phase (5<sup>th</sup> to 14<sup>th</sup> day): The secretions of uterine gland become very thin at the stage of ovulation to facilitate the entry of sperm.<sup>[24]</sup>

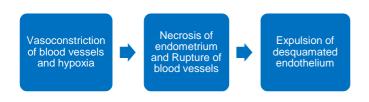


In secretory phase (15<sup>th</sup> to 28<sup>th</sup>): Endometrium lining become thick and uterine gland secretions become thicker so the path of sperm is blocked, coitus at this stage is safe. In this stage preparation of uterus to receive the fertilized ovum.



In menstrual phase (0 to 5<sup>th</sup> Day): Due to sudden withdrawal of the estrogen and progesterone that leads to menstruation.<sup>[25]</sup>

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#### Role of uterus in pregnancy

Uterus is elastic in nature so it changes in its size. Uterus helps to implantation of blastocyte, holds baby and placenta, a liter of amniotic fluid. The uterus provides nourishment to fetus and helps to develop during gestation.

#### **Arteries**

The ovarian artery supplies blood to the ovary and uterus. The ovarian arteries swell during pregnancy, in order to increase the uterine blood supply.

#### **Pathology**

If any injury to reproductive organs leads to disease like Infertility, Dyspareunia, Dysmenorrhea etc.

#### Infertility

According to the world health organization (WHO), infertility can be described as the inability to become pregnant, maintain a pregnancy or carry a pregnancy to live birth. It affects an estimated 48 million women. Infertility is caused by many sources including nutrition, malformations of the uterus and also disorders of ovulation, tubal factors, uterine abnormalities and others. [26] Previous surgeries are an important cause of tubal disease and damage. Pelvic or abdominal surgery can result in adhesions that alter the tubes in such a way that eggs cannot travel through them. [27] So it may cause inferlity.

#### **Dyspareunia**

It is recurrent or persistent pain during or after intercourse. It is due to medical or psychological causes and also vulvovaginal infections, atropic changes of lower genital tract, painful episiotomy scars, PID, endometriosis, ovarian cysts, pelvic tumor. [28] Dyspareunia is also caused by cancer of the reproductive tract, uterus or vagina surgery, episiotomy, forceps delivery. [29] The pain can primarily

be on the external surface of the gentalia or deeper in the pelvis upon deep pressure against the cervix. [30]

#### **Dysmenorrhea**

Menstrual cramps or painful menstruation of sufficient magnitude so as to incapacitate the woman in her day to day activities.<sup>[31]</sup> Its usual onset occurs around the time that menstruation begins. Psychosomatic factors, abnormal anatomical and functional aspect of uterus, Hormonal imbalance and also Postsurgical adhesions caused by caesarian section, episiotomy are the cause of dysmenorrhea.<sup>[32]</sup>

#### **DISCUSSION**

#### Bija / Aartava - Ovum

Beejarupia Aartava is released after twelve days. The Beejarupia Aartava (ovum) released from the ovary reaches the Garbhashaya (uterus) and unites with Shukra (sperm) forms the Garbha (fetus). So it can be taken as Beejarupi Aartava is ovum.

#### Aartava - Menstrual blood

Drusta Artava i.e. Rajasrava, which is accumulated in a month is drawn towards the vaginal orifice by Vata through the Dhamani's and this is called as Drustaartava (menstrual blood), which flows for 3 to 5 days. Drustaartava can be taken as menstrual blood.

#### Garbhashaya - Moolasthana

#### **For Ovum**

The release of *Beejarupi Aartava* will be fruitful when it reaches the *Garbhashaya* and unites with *Shukra* and forms *Garbha*. *Garbhashaya* can be considered as uterus. Fertilization occurs in fallopian tube and that move towards the uterus and get implanted in layer of endometrium. Hence *Garbhashaya* is considered as one of the moola of *Artavavaha Srotas*.

#### For Menstrual blood

Garbhashaya gives shelter for accumulation of Drustaartava in a month. Regular discharge of blood and mucosal tissue (known as menses) from the inner lining of uterus through the vagina. Hence Garbhashaya is considered as one of the Moola of Artavayaha Srotas.

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#### Aartavavaha Dhamani - Moolasthana

There are 4 *Aartavavaha Dhamani* present in females. *Aartavavaha Dhamani* may be considered as arteries i.e. ovarian and uterine arteries.

#### **For Ovum**

Ovarian arteries responsible for formation of *Aartava* (ovum).

#### For Menstrual blood

Uterine arteries responsible for flow of *Aartava* (menstrual blood).

These arteries supplies the blood along with hormones (Estrogen, Progesteron, FSH, LH) and supplementation to endometrium layer of uterus. Arteries which supply more amount of blood during pregnancy for the formation of *Apara*. So by this *Aartavavaha Dhamani* consider as *Moola* of *Aartavavaha Srotas*.

#### Viddhalakshana

#### Vandhyatwa - Infertility

If any injury to *Aartava*vaha *Srotas* that leads to *Vandhyatwa*. In modern it can be correlate with the injury to female reproductive organs that leads to infertility. Injury is an important cause of tubal disease and damage. Pelvic or abdominal surgery can result in adhesions that alter the tubes in such a way that ovum cannot travel through them, that may cause for infertility.

#### Maitunaashishnuta - Dyspareunia

Any injury to the *Aartavaha Srotas* that leads to vitiation of *Vata*, that cause the *Maitunaashishnuta*. It can be corelated with intolerance to coitus, difficulty in coitus or painful coitus (dyspareunia). It may be due injury, trauma or irritation to uterus and vagina by an accident, pelvic surgery, cut made during childbirth to enlarge the birth canal (episiotomy) that leads to dyspareunia.

#### Aartava Naasha - Dysmenorrhea

Injury to *Aartavavaha Srotas* leads to vitiation of *Vata*, that vitiated *Vata* causes the vitiation of *Kapha* so by these *Aavarana* of *Dosha* takes palce in *Aartavaha* 

*Srotas* which leads to *Aartavanasha*. It can be corelate with the injury to ovary, ovarian arteries and uterus, uterine arteries and fallopian tubes that leads to dysmenorrhea.

#### **CONCLUSION**

Aartava can be taken as Bijarupia Aartava and Drustaartava i.e. ovum and menstrual blood respectively. Moola of Aartavavaha Srotas can be considered as Garbhashaya and Aartavavaha Dhamani. Garbhashaya can be compare with uterus, that help for development of fetus. Dhamani can be compare with arteries. Ovarian arteries responsible for formation of Aartava (ovum). Uterine arteries are responsible for flow of Aartava (menstrual blood). Vandhyatva is caused by injury to the Aartavavaha Srotas and its relevance is seen in relation to the tubal diseases and its damage, leads to infertility. Maithuna Asahishnuta can be correlated with Injury, trauma or irritation to the uterus and vagina due to an accident, pelvic surgery or cut made during childbirth to enlarge the birth canal. Aartavanaasha can be understood with, the injury to ovary and ovarian arteries, uterus and uterine arteries.

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