

A CRITICAL REVIEW ON ARTAVAVAHA SROTAS WITH SPECIAL REFERENCE TO FEMALE REPRODUCTIVE SYSTEM

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ABSTRACT

Srotas, meaning channels or pores, are present throughout the visible body as well as at the “invisible” or subtle level of the cells, molecules, atoms, and subatomic strata. Through these channels the nutrients and other substances are transported in and out of human physiology. When the flow of appropriate nutrients and energies through these channels is unimpeded, there is health; when there is excess, deficiency, or blockage in these channels disease can take root. Some srotas have obvious correlates with modern science. e.g. both Ayurveda and modern science recognize the annavaha srotas, or gastrointestinal channel and the pranavaha srotas, or respiratory passageways. One cannot correlate some srotas with modern science. Those are, artavavaha srotas or udakavaha srotas, carrying the monthly menstruum and the pure water in the body respectively. The female reproductive system (or female genital system) is made up of the internal and external sex organs that function in human reproduction. The female reproductive system is immature at birth and develops to maturity at puberty to be able to produce gametes and to carry a fetus to full term. The internal sex organs are the uterus and fallopian tubes. Fallopian tubes, and the ovaries. The uterus or womb accommodates the embryo which develops into the fetus. The uterus also produces vaginal and uterine secretions which help the transit of sperm to the Fallopian tubes.

Keywords: Artava, srotas, uterus, fallopian tube

INTRODUCTION

Those from which Sravana or flow of body substances take place or those through which the materials flow in the body are called Srotases.¹ Thus Srotases are the channels of the body through which the materials needed for tissue building, nutrition and other nutrients flow from one corner of the body to the other. It can be dealt that the materials are transported through the channels from the place of production to place of need.² Srotas are the pathways through which Rasa, rakta etc. tissues are transported or the pathways

through which the tissues flow are called Srotas. According to Chakrapani, the commentator of Charaka Samhita, the channels which transport the poshaka dhatus (the part of the rasa etc tissues which flow to provide nutrition to the successive tissues) are called Srotas.³ These srotases are atisukshma athibahu aparisankhya according to their rachana.⁴ The word ayanamukhani is used as adjective of srotamsi.⁵ Along with vahana of different dhatu, upadhata and mala through ayanamukhasravana kriya always takes place in srotas.⁶ As like sira, dhamani and

rasayani srotasses are also avakashayukta. Shunyasthanana of siradhamani and rasayanis are visible but space between srotasses are very less so it is not visible.⁷

Srotass karma– Abhivahana is karma of srotass. Abhi means prativahana that means taking of. Taking from one place to another place this function is called as abhivahana. From entrance upto nirgama the process is called as abhivahana. In every srotass abhivahana kriya is a common symptom. Along with this srotas is having karma of sravana. Sravana means oozing and every srotass function is also different. Chakrapani comments as srotassess makes vahana of dhatus which are produced after parinaama from one place to another.

Importance of srotovignana

When vikrati takes place in any srota then its effect will fall on the dhatu which makes its vahana. Therefore, sthanastha dhatu or margasta dhatu also becomes vikrata. In the hardness of rasavaha srota in rakta also skandana takes place and granthi bhaava will produce.

TYPES OF SROTAS

Pranavaha, udakavaha, Annavaha,
Rasavaha, Raktavaha, Mamsavaha,
Medavaha, Asthivaha, Majjavaha,
Shukravaha, Mutravaha, Pureeshavaha,
Swedavaha are the 13 types of srotasses.^{8,9}

Pranavaha, Udakavaha, Annavaha,
Rasavaha, Raktavaha, Mamsavaha,
Medavaha, Mutrvaha, Pureeshavaha,
Shukravaha, Artavavaha these srotas are in pairs.¹⁰

Two srotas are specific for women:

- Artavavaha srotas - the channels which carry the menstrum

- Stanyavaha srotas - the channels carrying the breast milk during lactation

The Artavavaha srotas or channels carrying the menstrual blood out of the body during monthly menstrual cycle in women are 2 in number.^{11, 12}

Female reproductive system comprises of primary sexorgans and accessory sex organs. Primary sex organs are a pair of ovaries, which produce eggs or ova and secrete female sex hormones, the estrogen and progesterone. Accessory sex organs in females are:

1. A system of genital ducts: Fallopian tubes, uterus, cervix and vagina
2. External genitalia: Labia majora, labia minora and clitoris.¹³

At certain intervals, the ovaries release an ovum, which passes through the Fallopian tube into the uterus. If, in this transit, it meets with sperm, a single sperm can enter and merge with the egg, fertilizing it. The corresponding equivalent among males is the male reproductive system.

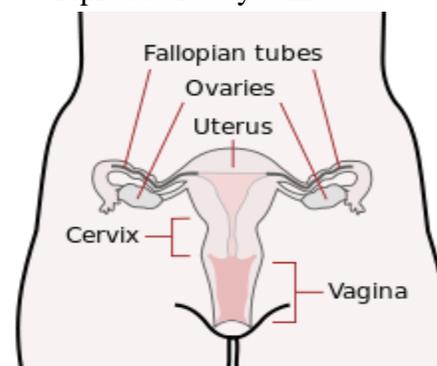


Fig 1 Frontal view as scheme of reproductive organs

Symptoms of injury of Artavavahasrotas-

When the AartavaVaahini Dhamanis are injured, they cause:

1. Vandhyata – infertility
2. Maithuna asahishnutaa – Intolerance to sex, difficulty in sex or painful sex (dyspareunia)
3. Aartava naasha – Amenorrhoea or Dysmenorrhoea.¹⁴

Management of Artavavaha srotodushti (vitiatio n of artavavaha srotas) –

The vitiatio n of Artavavaha srotas should be managed on the lines of treatment of Yoni vyapad (vaginal, uterine disorders) and Artavavyapat (disorders of menstruation)¹⁵

Gynecology is the study of female organs of reproduction and their diseases. In Ayurveda, these are studied in ‘Stree RogaVigyan’.

Causes of Stree Roga (Gynecological diseases) are mainly

- Artavadosha (Menstrual irregularities)
- Bijadosha (Defect in Ovum / genetic mutations)
- Abnormal diet and habits
- Excessive coitus etc.¹⁶

Gynecological diseases are described as ‘Yoni Vyapad’ which are 20 in numbers and cover most of the diseases prevalent in this era. Diseases and their management can be understood as under

- **Yoni Vyapad** : Pittaja (Pelvic Inflammatory Disease), Shleshmiki (Trichomoniasis), Raktayoni (Dysfunctional Uterine Bleeding), Arajaska (Secondary Amenorrhoea), Upapluta (Candidiasis), Karnini (Cervical ectopy), Vandhya (Primary Amenorrhoea), Putraghni (Recurrent Pregnancy Loss), Udavartini

(Dysmenorrhoea), Phalini (Cystocele), Mahayoni (Prolapse).

- Asrigdhara / ArtavaVyapad (Menstrual Irregularities).
- Arbuda & Granthi (Tumours & Cysts) eg. Uterine Fibroid, Follicular Cysts.
- Vandhyatva (Infertility).
- Rajonivritti (Menopause).

Management of Stree Roga (Gynecological diseases) is by Panchakarma (five methods of purification) especially Uttar basti; Oral medicines and Local application of medicine in the form of oil, decoction, paste etc as vaginal tampons , douche , fumigation etc.

The Ayurvedic treatment not only cures the pathology in reproductive organs but with holistic approach, treats the woman as a whole, thereby improving the general health also.

DISCUSSION

Srotasses are distributed from the root to any terminal portion of the structure or body.

Srotasses are located within the spaces of the body; they spread all through the body and carry essential materials. They are totally different structures from Siras (veins, lymphatics etc) and dhamanis (arteries, nerves). The srotas has the colour of the dhatu (tissue) that they are carrying or transporting. They are of different shapes and sizes namely, round, thick, large, small, microscopic, and elongated and form network and branches. With this description, each and every cell can be considered as a srotas since the transportation mechanism is taking place in and out of the cell. While describing the varieties of Srotas Acharya Charaka specified that as many solid structures are present in the body, the same number and types of Srotas are also present.

Artavavaha srotas

Aartava Vaha Srotas – Channels which carry the menstrual blood

Their roots are located in Garbhaashaya – Uterus, AartavaVaahini Dhamanis – Fallopian or uterine tubes or the dhamanis (arteries) which take part in supplying the uterine blood and also in the menstruation process.

Fertilization usually occurs in the Fallopian tubes and marks the beginning of embryogenesis. The zygote will then divide over enough generations of cells to form a blastocyst, which implants itself in the wall of the uterus. This begins the period of gestation and the embryo will continue to develop until full-term. When the fetus has developed enough to survive outside the womb, the cervix dilates and contractions of the uterus propel the newborn through the birth canal (the vagina).

The female internal reproductive organs are the vagina, uterus, Fallopian tubes, and ovaries.

Uterus

The uterus or womb is the major female reproductive organ. The uterus provides mechanical protection, nutritional support, and waste removal for the developing embryo (weeks 1 to 8) and fetus (from week 9 until the delivery). In addition, contractions in the muscular wall of the uterus are important in pushing out the fetus at the time of birth.

The uterus contains three suspensory ligaments that help stabilize the position of the uterus and limits its range of movement. The utero-sacral ligaments keep the body from moving inferiorly and anteriorly. The round ligaments restrict posterior movement

of the uterus. The cardinal ligaments also prevent the inferior movement of the uterus. The uterus is a pear-shaped muscular organ. Its major function is to accept a fertilized ovum which becomes implanted into the endometrium, and derives nourishment from blood vessels which develop exclusively for this purpose. The fertilized ovum becomes an embryo, develops into a fetus and gestates until childbirth. If the egg does not embed in the wall of the uterus, a female begins menstruation.

Fallopian tube

The Fallopian tubes are two tubes leading from the ovaries into the uterus. On maturity of an ovum, the follicle and the ovary's wall rupture, allowing the ovum to escape and enter the Fallopian tube. There it travels toward the uterus, pushed along by movements of cilia on the inner lining of the tubes. This trip takes hours or days. If the ovum is fertilized while in the Fallopian tube, then it normally implants in the endometrium when it reaches the uterus, which signals the beginning of pregnancy.

Ovaries

The ovaries are small, paired organs located near the lateral walls of the pelvic cavity. These organs are responsible for the production of the egg cells (ova) and the secretion of hormones. The process by which the egg cell (ovum) is released is called ovulation. The speed of ovulation is periodic and impacts directly to the length of a menstrual cycle.

After ovulation, the egg cell is captured by the fallopian tube, after travelling down the Fallopian tube to the uterus, occasionally being fertilized on its way by an incoming sperm. During fertilization the egg cell plays

a role; it releases certain molecules that are essential to guiding the sperm and allows the surface of the egg to attach to the sperm's surface. The egg can then absorb the sperm and fertilization can then begin. The Fallopian tubes are lined with small hairs to help the egg cell travel.

The cervix or the lower opening of the uterus and Vagina can also be taken as Aartavavahini dhamani because the menstrual blood flows out through them during the monthly periods in women.

A woman undergoes various physical and physiological changes during her reproductive period that is from menarche (onset of menstruation) to menopause (Cessation of menstruation). Awareness and management of these changes are necessary for a woman to remain healthy.

Ayurveda stresses on the importance of health of woman, as she only, can procreate and thus lay the foundation of healthy society.

CONCLUSION

Srotas are the channels or spaces which are responsible for any movement, conversion, transformation or change. Artavavaha srotas can be compared to female reproductive system because the moolasthanana of Artavavaha srotas is garbhashaya and Artavavaahi dhamani. Garbhashaya here is uterus and Aartava Vahini Dhamanis are the Fallopian or uterine tubes or the dhamanis (arteries) which take part in supplying the uterine blood and also in the menstruation process. The aim of Reproductive system is to produce healthy progeny. 20 types of Yonivyaapad explained in Ayurveda results in difficulty in reproduction or the problems related to it.

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