

AYURVEDA CONCEPTS OF SROTAS AND THEIR PHYSIOLOGICAL ROLE IN BODY: AN AYURVEDA REVIEW

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ABSTRACT

Ayurveda classics emphasized concept of “Srotomayam hi shariram” which indicates that human body is comprises of innumerable minute channels which helps to perform transportation of many nutrients and waste. Ayurveda described these minute channels as Srotas which govern gross and subtle energetic. Srotas are macro and micro pathways of body which are filtering, leaking and secreting in nature. Srotas are systems of body in which material get metabolized, transported and secreted. Srotas transport nutrients thus potentiates Dhatus and helps to built up body, Srotas perform elimination of waste and maintain normal circulatory process of body. Srotas are fine passages and pores present in the body, the improper functioning of Srotas can leads pathological problems therefore normal working of these micro-channels is important for good health and well being. Sira, Dhamani, Rasayani, Rasavahini, Pantha, Niketa, Marga and Sharir chidra, etc. are associated structure or synonyms of Srotas. Present article emphasizes Ayurveda concepts of Srotas and their physiological role in the body.

KEYWORDS: Ayurveda, Srotas, Physiology, Channels.

INTRODUCTION

Ayurveda mentioned that human body comprises innumerable channels (*Srotas*) which performs many physiological activities. The *Dosha* & *Dhathu* exhibited their physiological role inside the body with the help of *Srotas* and elimination of *Mala* and toxins also facilitated by *Srotas*. The *Avayavas* (organs) associated with *Srotas* and these minute channels support each organs of body to perform their function. The term *Srotas* derived from the word “*Susravana*” which means process of exudation, to ooze and to filter. The flow and transportation of substances takes place through the *Srotas* therefore these channels needed for nutritional supply, tissue building and detoxification.^[1-4]

Sushruta mentioned that *Srotas* helps in the transportation of *Prana*, *Anna*, *Vari* and *Dhathu*. *Srotas* are pathways of nervous system governed by *Vayu* and play important role in physiology of human body. The other anatomical structures of human body i.e. vein, artery, lymphatics ducts, capillary, body orifices, repertories and resorts, etc. are also perform function similar to that of *Srotas* therefore described as synonyms of *Srotas* in some classical texts of Ayurveda.^[3-6]

Srotas are *Sthula*, *Anu*, *Vrutta*, *Deergha* and *Pratanasadrusha* in nature, the colour of *Srotas* is

similar to that of materials transporting through them. *Vagbhata* described two types of *Srotas* as depicted in **Figure 1**.



Figure 1: Types of Srotas as per Vagbhata.

The *Sthula Srotas* are perceptible while *Sukshma Srotas* are imperceptible. *Charaka* has said that biochemical molecules under metabolic process are held and carried through *Srotas*. These *Srotas* are considered functional pathways for *Prasadhakya* and *Malakhyakya* molecules, thus *Srotas* are important for maintaining supply of essential nutrients and to eliminate waste from the body.^[6-8]

The specific properties of Srotas support their physiological functioning in following ways

✚ Gross nature helps to carries bulk of biochemical process.

- ✚ The microscopic nature support transportation of small molecules, absorption and diffusion of bio-molecules and drugs.
- ✚ The round shape helps to retain substances within *Srotas*
- ✚ Elongated shape provide directive transportation

Ayurveda described clinical aspect of *Srotas*, the disturbance in *Srotas* regarded as *Atipravritti*, *Sanga*, *Sira granthi* and *Vimarg gaman*, etc. *Atipravritti* means excessive flow thorough *Srotas*, *Sanga* means retention of materials by *Srotas*, *Sira granthi* means dilatation veins and *Vimarg gaman* indicates flow of other content or opposite way flow.

Importance of *Srotas*

- Any corporeal entities can't arise or decay without *Srotas*.
- They are transporting passages for metabolic transformation.
- The pervasiveness and diffusiveness of *Srotas* aggravates and pacifies *Dosha*.
- *Srotas* forms both gross channels i.e. gastro-intestinal tract, respiratory tract and genito-urinary tract, etc., as well as micro channels including capillaries, lymphatic system and vessels, etc.,
- *Srotas* also associated with molecular channels and membranous pores of body.
- It is stated that healthy state of *Srotas* is pre-requisite for the maintenance of good health.
- Disturbance in *Srotas* may leads to *Sammurchana* of *Dosha* and *Dushya* which results pathological condition inside the body.
- *Kshaya* & *Vrudhi* of body components not possible without the help of *Srotas*.
- *Srotas* by eliminating waste prevent condition of edema and swelling.

Physiological role of *Srotas*

- ✓ These are minute channels through which nutrients, biological materials and waste product flow from and the *Kostha* to the exterior.
- ✓ *Srotas* supports *Samsodhana* therapy since effective elimination of waste only possible when *Srotas* remain in healthy state.
- ✓ *Srotas* helps to move *Vata*, *Pitta* and *Kapha* therefore maintain balances of *Doshas*.
- ✓ *Grahana* or *Sangrahana* are main function of *Srotas* which involves storage and collection of bio-materials.
- ✓ *Srotas* perform functioning of *Sravana* means to secrete, to oozing out, to discharge and to exudates materials.
- ✓ Absorption & assimilation of materials.
- ✓ *Srotas* helps in *Pachana* and diffusion of nutrients.
- ✓ *Dhatu* is generated by *Srotas* thus these channels helps in body built up.
- ✓ *Srotas* receives nutrients from *Aahar rasa* and nourishes *Dhatu* thus helps to maintain good health.

- ✓ *Srotas* manages pH, maintain body temperature and regulate thermostat of body.
- ✓ *Srotas* helps to regulate enzymes activities and hormonal functioning.
- ✓ *Srotas* maintain electrolyte balance and prevent deprivation of body.
- ✓ *Srotas* helps in biotransformation and metabolic process of body.
- ✓ *Srotas* carries *Poshyabhavas* which can be used by tissue, these *Poshyabhavas* transported by *Srotas* support tissues to perform their functioning.
- ✓ *Srotas* facilitate selective absorption and diffusion of substances which forms essential biological products i.e. urine, blood and sweat, etc.
- ✓ *Srotas* facilitate process of sweating which is important for detoxifying body and maintaining temperature of body.
- ✓ *Srotas* helps to maintain fluid level of body thus retain circulatory process.
- ✓ *Srotas* as mentioned above nourishes body thus regulates process of growth and development.
- ✓ *Srotas* transport *Rasa* which carries inherent antibodies, in this way *Srotas* support defense mechanism of body facilitate transportation of antibodies at the site of action.
- ✓ *Srotas* provides energy by circulating essence of *Ahara* therefore helps to perform routine work.
- ✓ Rejuvenates body and maintain exchange of gases.
- ✓ *Srotas* helps in reproductive functioning and play vital role in regulating menstrual cycle in female.

Specific functioning of *Srotas*

There are different types of *Srotas* based on their origin and distribution, these *Srotas* perform particular action and govern normal physiology of human body. *Pranavaha Srotas*, *Udakavaha Srotas*, *Raktavaha Srotas*, *Mutravaha Srotas*, *Anna Vaha Srotas*, *Rasa Vaha Srotas*, *Sukra Vaha* and *Artava Vaha Srotas*, etc. are some *Srotas* which control specific activities of body. *Pranavaha Srotas* helps in transporting *Prana*, *Udakavaha Srotas* transport water and other fluids. *Raktavaha Srotas* carries *Rakta*, *Mutravaha Srotas* involves in transportation of urine and waste products. *Anna Vaha Srotas* transports *Ana Rasa* and nutrients, *Sukra Vaha* & *Artava Vaha Srotas* support reproductive system and *Rasa Vaha Srotas* perform transportation of *Rasa*.^[8-10]

CONCLUSION

Ayurveda *Acharyas* described importance of *Srotas* towards health and integrity of physiological system. *Srotas* are considered inner transport system of human body which support many physiological activities related to the *Dosha*, *Dhatu*, *Oja* and *Agni*, etc. *Srota* are mainly perform function of transportation of biomaterials therefore provides nourishment to the tissue and facilitate elimination of waste materials from the body thus govern detoxification process which is very important for retaining normal health. Metabolism of *Poshya dhatu* also occurs in *Srotas* these metabolites as essence of

Ahara reaches to the various parts of body through *Srotas*. The formation, transportation and destruction of *Dosha*, *Dhatu* and *Mala* depends upon physiology of *Srotas* therefore normal functioning of *Srotas* is important for maintain good health status.

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