ABSTRACT

Srotas are the channels of circulation or dynamic inner transport system of the body which provide platform for activities of other important bio-factors like three Dosh, Dhatu, Oja, Agni etc. The word Srotas is originated from the main Sanskrit root “Sru Srawane” meaning the structure to flow, to exudates, to filter, to ooze and permeate. Each Srotas is attached to a specific anatomical structure called Moola. The normal functioning of Srotas depends on Moolstana. Rakta is considered as Jeevan in Ayurveda texts. Raktavaha Srotas are channels of circulation concerned with the blood formation, storage and circulation of blood and lymph in body. Yakrita, Pliha and Raktavahi dhamnis are considered as moolsthana of Raktavaha srotas by Acharyas. Yakrita can be correlated with Liver. Most of the blood related concepts like haemopoiesis, storage and decomposition of red blood cells are rooted in liver. Microscopically, liver is made up of minute channels of circulation or vessels which help in normal functioning of Liver.

KEYWORDS

Srotas, Raktavaha Srotas, Yakrit, Liver
INTRODUCTION

*Srotas* represents inner transport system of the body. *Srotas* are important concept of *Ayurveda* because innumerable *Srotas* are present in *Sharir* or *Purush*. According to *Charaka* the channels of circulation, carrying the *Dhatu* (tissue elements or their constituents), undergoing transformation, to their destination are called as *Srotas*\(^1\). *Acharya Sushruta* has defined *Srotas* as the hollow channels except large *Siras* and *Dhamanis* which originating from root space, spreads in the body and circulates and exudes of the specific entities\(^2\). There are thirteen main *srotas* described by *Acharya Charaka* and eleven pairs of *srotas* are described by *Acharya Sushruta*\(^3,4\). *Rakta dhatu* is the primary fire of the body. *Raktavaha srotas* are channels involved in blood formation, circulation, functioning or destruction of blood or lymph. *Yakrita*, *Pliha* and *Raktavahi dhamnis* are considered as *moolsthana* of *Raktvaha srotas*. Liver is body’s largest gland. Liver is associated with the formation and circulation of blood from embryonic life. Blood from GIT comes here, detoxifies and then provides nutrition to whole body.

*Raktvaha Srotas* and its *Moolsthana*:

*Raktvaha srotas* are the channels associated with the formation, transportation and transformation of *rakta dhatu* directly or indirectly. *Chakrapani* has described *Moola*\(^5\) as *Prabhav Sthana* of *Srotas*, means the anatomical seat of respective *srotas*, function regulatory site of that *srotas* or main seat of pathology of that *srotas* or principle seat of manifestation of the diseases of that *srotas*. *Moolsthana* of *Srotas* can be determined by *Upatti Sthana*, *Sangrah Sthana*, *Vahan Sthana* of that *Dhatu*, or by *Niadanik* or *Chikitsatmak drishtikon*. The site of origin or the site which regulates functioning of these *srotas* is considered as *Srotomool*. Any abnormality in the *srotas* ultimately affects the *moola*. After management of the *moolsthan* of the *srotas*, basic management of the disease pertaining to that specific *srotas* gets completed\(^6\).

*Acharya Charka* has mentioned *Yakrita* and *Pliha* as *moolsthana* of *Raktavaha srotas*\(^7\) whereas *Acharya Sushruta* has mentioned *Yakrita*, *Pliha* and *Raktavahi dhamnis* as *Raktvahasrotomool*\(^8\). During embryonic development origin of *Yakrit* and *Pliha* takes place from *Shonit* (*Rakta*)\(^9\) and after birth for a particular time period production of *Rakta* takes place in *Yakrit* and *Pliha*. Hence on the basis of
gunsamanya ashraya- ashrayi relation between Yakrit and Shonit dhatu gets proven successfully.

According to Ayurveda, when food is ingested by individual, it is converted into Rasa and waste matter is excreted as mala. This Rasa is converted to Rasa dhatu by dhatvagni which is used by body. In Yakrita, Ranjak Pitt is present, which gives colour to the Rasa dhatu and with the help of dhatwagni, Rakta dhatu is formed which is transported to the entire body and is used for its various functions. Main role of Rakta dhatu is Jeevan- giving life; because it is the vehicle for prana- carries it through the body. Channel of circulation (srotas) are seriously affected when their srotomool is affected. So Srotomool chiktsa is also helpful in treatment of dhatupradoshaj vikaras.

**Symptoms and Management of Raktavah Srotodushti:**

The diseases or symptoms caused by vitiation or contamination of Raktavah Srotas are\textsuperscript{10,11}:

- **Pandutaa** (Pallor), **Paleeha** (spleen enlargement), **Kamlaa** (Jaundice), **Jwara** (Fever), **Dahaa** (burning sensation), **Shonit aagmana** (bleeding), **Rakt netrata** (reddish discolouration of eyes), **Kushta- visrpa** (Skin diseases), **Gudmedhra paka** (inflammation of perineal region) etc.

Injury to blood vessels or liver or spleen cause bleeding and pain which cause these symptoms. The chief symptoms are shock, pain and tenderness and evidences of blood loss. Well marked pyrexia may follow the initial shock. There may be diseases of Liver and spleen as these are moolsthana of Raktavah Srotas.

Management of Raktavahi srotodusti\textsuperscript{12} includes Raktapittahari kriya (management in bleeding disorders), **Virechana** (therapeutic purgation), **Upavasa** (starvation), **Raktamokshan** (blood letting treatment). Due to Virechana and Raktamokshan, vitiated blood comes out from body. Upavasa cause pachana of dusht blood.

**DISCUSSION**

Srotas are pathway of Rasadi Dhatus. Srotas represents the internal transport system and includes a series of the channels through which Ras- Raktadi dhatu is propelled to all parts of the body. Srotas indicate all macro, micro level descriptions pertaining to exchange, transportation and excretion. Raktavah Srotas are the circulatory channels in which plasma and lymph flows in the body. Moola of Raktavaha Srotas is Yakrit.
and Pleeha. In the foetal hematopoiesis, principle organ of blood formation is Liver, from the fifth week of gestation. From the moola, transformation takes place. Various products required for hematopoeisis (viz, Fe, Vitamin –B12, Folate etc) are transported from liver and spleen, to the hematopoetic organs for hematopoeisis. So liver is the regulatory site of blood formation and its functioning. Vessels which enter or leave the liver or spleen and transport blood and lymph or where the transformation or functioning of Rakta or lymph takes place are Raktavaha Srotas. Liver and Spleen are associated with formation of blood, destruction of RBC’s, detoxifies the blood from the gut and transfers it in the whole body. Bile pigments formed in the Liver are formed by decomposition of Red blood cells. Bile helps in the digestion of food and formation of poshak rasa. Ranjak Pitta in Liver helps in Ranjan karm of Rasa dhatu. With the help of Dhatwagni Rasa is converted into Rakta in Liver. Liver can be considered as Raktavaha Srotomool since it regulates the formation, transportation and decomposition of blood.

CONCLUSION
Srotansi indicate all macro, micro level descriptions pertaining to exchange, transportation and excretion. Srotas are specific to carrier substance which they transport. So, from the above study and discussion, it can be concluded that the vessels or channels of circulation entering or leaving the Liver and circulate the blood and lymph to whole body can be considered as Raktavaha Srotas. Vessels of circulatory system which transport blood and lymph to body can be considered as Raktavaha Srotas. These Srotas are associated with formation, circulation, transformation and decomposition of blood or lymph. Blood formation takes place in Liver in foetal life. Liver is associated with the formation, transportation and decomposition of blood. Raktavaha srotodushti can cause diseases of Yakrita. Raktavaha srotodushti vyadhis can be treated by treating the moolsthana of Srotas (Yakrit and Pleeha). So liver can be considered as moolsthana of Raktavaha Srotas according to Utpatti Sthana, Sangrah Sthana, Vahan Sthana of Rakta dhatu and by Niadanik or Chikitsatmak drishtikon.
REFERENCES


