

Assessment and evaluation of *Srotomula*

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Abstract:

Srotas is a structural and functional unit of the body through which substances flow from one part to another. Each *Srotas* is said to associate with two organs which are termed as *Srotomula*. *Srotomula* is the most vital part of the *Srotas* just like the root of the tree. In classics neither the detail description about *Srotomula* is available nor the reason mentioned for considering particular organs as the *Srotomula*. Hence the present study was undertaken with the aim to assess and evaluate the relation between *Srotas* and its *Mula*. Also it is essential to compare the views of both Charaka and Sushruta regarding *Srotomula*. For present study relevant information regarding *Srotas* and its respective *Dhatu* from Samhitas, various texts, articles etc was compiled and interpreted. After analyzing all the conceptual material it was found that *Srotomula* could be considered as either the originating place, storage place, controlling place, conduction place, terminating end or the site of manifestation etc. After comparing the views of both *Acharyas* it was found that Charaka has narrated the concept from physiological point of view whereas Sushruta has given more emphasis on the anatomical aspect of *Srotomula*.

Key words: *Srotas*, *Srotomula*, Charakasamhita, Sushrutasamhita

INTRODUCTION:

Human body is mainly composed of three kinds of material viz. *Dosha*, *Dhatu* and *Mala* [1]. Although all these entities are present in body itself, but some kind of transporting system is required to carry these material from the site of production to the site of action. For such transportation of body constituents, the special term '*Srotas*' is used which denotes a channel through which substance flow from one part to another part [2]. *Srotas* is a structural and functional unit of the body. For any structural or functional constitution two ends are necessary. From the one end it will start or begin the functions and at the other end it will finish the functions. Hence, for *Srotas* the two entities are designed in terms of body organs which are described as *Srotomula* (root of *Srotas*).

All the ancient *Acharyas* described two *Mula*'s for each *Srotas* but the reason of considering specific organ as *Mula* of particular *Srotas* is nowhere mentioned in classics. *Acharya* Sushruta and Chakrapani had given the definition but that too is not enough to describe the information about *Mula*. Chakrapani has compared the *Srotomula* with the root of the tree and said that as the injury to root leads to the destruction of the tree, similarly injury to *Srotomula* can affect the whole *Srotas* [3]. So, *Mula* can be the physiological or anatomical controlling centre of the *Srotas* due to

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which body maintains its dynamic equilibrium. From the conceptual point of view there is hardly any description about the term *Srotomula*. The research works carried out on *Srotomula* enables in understanding the concept somewhat. The foremost work on *Srotomula* in detail was done by Deshapande A. et. al. which considered the *Srotomula* as the *Samgrahasthana*, *Samcharisthana*, *Abhivyaktisthana*, *Niyantraksthana*, *Samchayasthana* etc [4]. M.K. Madankumar et. al. concluded that *Mulasthanas* are better understood as governing sites of formed *Dhatus* [5]. Deejia C.R. et. al. concluded that *Mulasthanas* is the master organ of the particular system which may be developmental or generative place [6]. Pawar Pradeep Shivram et. al. concluded that the assessment of *Mulasthanas* cannot be ascertained always in the pervue of anatomical angle. In this regard the controlling inputs of the functions of the *Srotas* and the physiological angles are also to be considered [7]. All these works gives some direction about what *Srotomula* could be but has not been dealt with enough examples and details to explore the concept.

Hence the present study was undertaken to assess and evaluate the concept of *Srotomula* and find out its different perspectives in relation to *Srotas*. The study was also determined to compare the views of Acharya Charaka and Sushruta on *Srotomula*.

Methods:

For the assessment and evaluation of *Srotomula*, literary material like *Srotodushti Karan*, *Srotodushti Lakshan*, *Kshaya*, *Vridhhi* and *Prakopa Lakshana* along with normal functions of particular *Dhatu*, treatment of *Srotas* and its *Dhatu* etc. were compiled and analyzed from Brihatrayi, Laghutrayi, various dictionaries, texts, research articles etc.

Observations and Results:

According to the Sanskrit lexicons the word '*Mula*' is derived from the Sanskrit root, "*Mule Pratisthayam*" which indicate about the surface or the base on which the particular things are resting. Another derivation is "*Mulam tu Adikaranam*" according to which the first causative factor of any phenomenon is known as *Mula* [8].

After analyzing the term '*Mula*' through various dictionaries it was found giving different meanings like *Ropane* (causing to grow), *Antike* (reaching to the end), *Jata* (the root), *Padam* (strong

base), *Shifa* (flexible root), *Bandhane* (dependent on), *Karan* (elementary cause) etc [9]. All these terms were applied in the context of *Srotomula* to understand it and also to understand the relation between *Srotas* and *Srotomula*.

As per the definition given by Chakrapani, *Mula* is the '*Prabhavasthana*' means the originating place or the governing site [10]. Sushruta considered *Mula* as the hollow organ from which the *Srotas* starts [11]. Both Charaka and Sushruta have described two roots (or three) for each *Srotas* which are listed in table 1 [12, 13].

Discussion:

After analyzing the literary material, various aspects of *Srotomula* was understood and it was found to performing various kinds of functions related to particular *Srotas*. Based on this following terms could be applied to *Srotomula*

Prabhavasthana (Place of origin/nutrition):

According to the definition, *Srotomula* is considered as the *Prabhavasthana* i.e. the place of origin from where the particular *Srotas* commences or gets the nutrition. In case of *Raktavaha Srotas*, *Rakta* is mainly produced at *Yakrit* and *Pleeha*; hence these are considered as the root organs. In case of *Mutravaha Srotas* also it has been said that *Vankshana* and *Basti* are associated with *Mutra Utpatti* [14]; so they are considered as root organs. *Vrikka* is one of the roots of *Medovaha Srotas*. According to Sharangadhara the *Vrikkas* nourishes the *Medodhatu* inside the stomach area of the abdominal cavity [15]. After the completion of digestion process, the formation of *Purisha* takes place in *Pakvashaya*; especially proximal 1/3 part of the large intestine is mainly related with the production of fecal matter. Hence from all the above examples it can be said the root organ is the place of origin for particular *Srotas*. According to the theory of *Dhatu Utpatti*, previous *Dhatu* is the precursor of next *Dhatu* [16]. According to Vagbhata *Mamsa*, *Meda*, *Asthi* and *Majja* are the root organs of *Medovaha*, *Asthivaha*, *Majjavaha* and *Shukravaha Srotas* respectively [17]. *Meda* is told as the *Mula* of *Swedovaha Srotas*. All these examples suggest that root organs are such from where the particular *Dhatu* gets its nourishment.

Samchara/Vahana Sthana (Conduction place):

The *Srotas* generally does the function of transportation of body tissues which are under metabolic processes. The part of the *Srotas* which helps to carry the nutritive material to respective *Dhatu* or its destination is considered as the root organ in some cases. *Rasavahi dhamanis* are told as the root of *Rasavaha Srotas*, which carries the function of circulation of '*Rasa*' all over the body [18]. Similarly *Raktavahi dhamani* and *Aartvavahi dhamani* also does the function of carrying their respective *Dhatu*. The *Shukradhatu* (semen) formed in *Vrishan* is conducted into female's body via *Shepha*. The *Purisha* formed in *Pakvashaya* is excreted out with the help of *Sihulaguda* or *Adharaguda*. Similarly the *Mutra* (urine) stored in *Basti* is transferred via *Vankshana Pradesha* upto the *Bahirmukha Srotas*. All the above examples indicate that the root organ does the function of conduction and hence can be considered as the conduction place.

Nyantraka Sthana (Controlling point):

As per the etymology *Mula* is the base or the governing site of particular *Srotas* and it controls the physiology of that *Srotas*. Any kind of impairment at such place leads to the disturbance in the functioning of that *Srotas*. Whenever there is any kind of injury/abnormality at *Hriday* the function of both *Pranavaha* and *Rasavaha Srotas* gets disturbed and various kinds of diseases are produced. For e.g. In *Hridroga* the symptoms like *Shwasa*, *Kasa*, *Hikka* etc. are produced which indicates the vitiation of *Pranavaha Srotas* whereas the symptoms like *Aasyavairasya*, *Aruchi*, *Jwara*, *Tandra* etc. indicates *Rasavaha Srotodushti* [19]. In the normal state of *Mahasrotas*, breathing process in *Pranavaha Srotas* occurs properly and if there is any disease pertaining to organs inside the *Kostha*, will lead to *Pranavaha Srotodushti*. For e.g. in *Udararoga*, *Gulma* etc. there is difficulty in expiration [20]. In *Yakrit Pleeha Vidradhi* there is obstruction in *Shwasmarga*, which results in difficulty in expiration and in *Nabhi Vidradhi*, hiccup is produced [21]. All these examples suggest that *Mahasrotas* works as controlling place for *Pranavaha Srotas*. Similarly *Vamaparshwa* i.e. *Grahani* is considered as the chief organ of *Annavaha Srotas* and the whole digestion process mainly depends upon the function of *Grahani* [22]. In case of impairment of *Grahani*, the process of digestion gets hampered and

Ama is produced. In the context of *Medodhatu*, many Scholars consider '*Vrikka*' as the Supra-renal gland which regulates the fat metabolism in the body. Few scholars consider '*Pancreas*' as *Vapavahana*. Pancreas also controls the process of fat digestion [23]. Charaka mentioned *Jaghana* as the principal organ of *Asthidhatu*. Any problem with *jaghana* or groin region leads to disturbance in the upright position of living body because pelvic bones are pillars of the body. The impairment in *Basti* leads to vitiation of *Mutravaha Srotas*. *Meda*, the *Mula* of *Swedovaha Srotas* when gets increased in quantity the Symptoms like *Snigdhangata*, *Daurgandhya* are produced which are related to *Swedovaha Srotas* [24]. *Garbhashaya* when gets impaired also produces the symptoms of vitiation of *Artvavaha Srotas* like *Alpartava*, *Atyartava* etc [25].

Samgrahasthana (Storage place):

As said earlier *Srotomula* can be considered as the chief organ of that *Srotas* where most of the *Dhatu* of particular *Srotas* is stored. In the context of *Raktavaha Srotas* *Rakta* is mainly stored at *Yakrit* and *Pleeha* [26]. *Amashaya* is the storage place of *Anna* (food). In case of *Medovaha Srotas* if *Vapavahana* is considered as *Omentum* then it can be said that it is the place where maximum fat accumulates. Sushruta told *Kati* as the *Mulasthan* at where also most of the *Meda* (fat) accumulates. In context of *Majjavaha Srotas*, *Majja* is basically found in long bones. The tissue bone marrow occupies the internal cavities of bones. *Shukradhatu* although belongs to each and every corner of body is produced in '*Vrishan*' and after that it stored there for proper time. *Purisha* also after its formation is stored in *Pakvashaya* (especially distal 2/3 part of the large intestine) till suitable period. Likewise, the *Mutra* also gets stored at its root i.e. *Basti* [27]. All such examples are definitely indicative about the storage function of root organs. Hence they can be considered as the storage place of particular *Srotas*.

Antima sthana (End point):

The term *Mula* also gives the meaning like end or last part. *Vamaparshwa* i.e. *Grahani* holds the food until the complete digestion and then after the division of *Sara* and *Kitta*, the material is relieved for further processing into the

Purishavaha Srotas [28]. In case of *Shukravaha* and *Mutravaha Srotas*, *Shepha* (penis) is one of the root which is clearly perceptible as the terminating end. *Sthulaguda* or *Adharaguda* is the end point of *Purishavaha Srotas* through which the *Purisha* is thrown out of the body. Likewise, *Lomakupas* are the terminating end of *Swedovaha Srotas* through which the *Sweda* (sweat) is secreted out of the body. From all such examples it can be said that the specific place where the particular *Srotas* ends is the root organ of that *Srotas*.

Abhivyaktisthana (site of manifestation):

It is a well known fact that *Srotas* and *Srotomula* are interdependent and hence vitiation of one leads to the vitiation of other. In the vitiation of *Udakavaha Srotas* the disease *Trishna* is produced which is manifested at *Talu* and *Kloma*. Similarly in the vitiation of *Annavaha Srotas* the symptoms like *Arochaka*, *Avipaka*, *chhardi* etc. are produced which are associated with *Amashaya* [29]. In *Rasakshaya* the symptom like '*Hridayam tamyati*' and *Hridayapida* are produced [30] and in *Rasavridhi* '*Hridayotkleda*' is mentioned [31]. All these symptoms indicate deformity of the organ '*Hriday*' which is the *Mulasthan* of *Rasavaha Srotas*. The vitiation of *Raktavaha Srotas* leads to the diseases like *Kamala* and *Pleeha* (enlargement of spleen) are produced which are pertained to the organs *Yakrit* and *Pleeha*. In the vitiation of *Mamsavaha Srotas* various diseases like *Arbuda*, *Keela*, *Alaji* etc. are produced [32] which are pertained to skin (*Twak*) which is said to be the *Mulasthan* of *Mamsavaha Srotas*. *Snayu* is another *Mulasthan* of *Mamsavaha Srotas*. In *Mamsakshya* the function of *Snayu* also gets diminished and hence the symptoms like *Sandhivedana*, *Sandhisphotana* are produced [33]. Prodromal symptoms of diabetes are produced in the vitiation of *Medovaha Srotas*, which shows the disturbance in the functions of *Vrikka* (kidney). In *Medakshaya* symptoms like *Katishwapa* or *Katiksheenata* are seen [34]. Further, most of the obese persons give the history of *Katishula* and *katigaurava* which is the *Mulasthan* of *Medovaha Srotas*. In *Majjakshaya* the symptoms like *Asthinistoda*, *Asthisaushirya*, *Asthishunyata* are produced which are related to its *Mula* i.e *Asthi* [35].

Shukrakshaya gives rise to the symptoms like *Medhra* and *Vrishan Vedana*, *Medhra* and *Vrishan Toda*, *Medhra Dhumayana* etc. which are pertained to

the *Mulasthan*s of *Shukravaha Srotas* [36]. In *Mutrakshaya* and *Mutravridhi* the symptom '*Bastinistoda*' is found which is related to *Mutravaha Srotomula* i.e. *Basti* [37]. In *Swedakshaya* the symptoms produced are *Stabdharomakupata*, *Romachyuti*, *Kandu*, *Lomaharsha* etc. indicating the involvement '*Lomakupa*' which is the *Mula* of *Swedovaha Srotas* [38]. All these examples prove that almost all the *Srotas* when gets vitiated produces the symptoms targeted to their root organs.

Comparison of the views:

If one compares the views of Charaka and Sushruta on *Srotomula*, there is diversity at some places. *Acharya* Charaka has described the *Srotomula*'s in context of vitiation of *Srotas* and by analyzing the root organs it could be said that they are described from physiological or pathological perspective mostly. But Sushruta has described the *Srotas* in context of *Mula Vidhhalakshanas*, hence primarily focused on the anatomical or surgical aspect. Regarding *Udakavaha*, *Raktavaha* and *Pureeshavaha Srotas*, all the three *Acharyas* Charaka, Sushruta and Vagbhata have almost identical opinion. The major difference between Charaka and Sushruta is that the latter has not described the *Mulas* of *Asthivaha*, *Majjavaha* and *Swedavaha Srotas* due to the reason that *Mulas* of all these *Srotas* are present in whole body. Dalhana gave the reason that injury to such roots is not useful for the knowledge of prognosis of the disease and also the disease pertaining to the whole body is under the rights of medicinal community whereas the people of *Shalyatantra* have to deal with local diseases mainly. While explaining the *Srotomula*, Sushruta has given more emphasis on *Dhamani* as he has described *Dhamani* as *Mula* of the *Srotas* in many cases like *Rasavahai Dhamani* as the *Mula* for *Pranavaha* and *Rasavaha Srotas*, *Raktavahi Dhamani* for *Raktavaha* and *Mamsavaha Srotas* and *Artavavaha Dhamani* for *Artavavaha Srotas*. The probable reason may be that *Dhamani* supplies the necessary material to the particular *Srotas* to work properly.

Acharya Charaka has described specific regions as the *Mula* of particular *Srotas* like *Mahasrotas* for *Pranavaha*, *Vamaparshva* for

Annava, *Jaghana* for *Ashtivaha*, *Vankshana* for *Mutravaha* etc. This may be due to the fact that these regions are taking part in the normal physiology of that *Srotas* and also any deformity in that region will affect the functioning of *Srotas*. The other reason could be that the major part of those *Srotas* may be lying in that particular area. In some cases particular *Dhatu* is mentioned as the *Srotomula* like *Mamsa* for *Medovaha*, *Meda* for *Asthivaha* and *Swedavaha*, *Asthi* for *Majjavaha* etc. All this relations highlight the basic theory of Ayurveda 'One *Dhatu* is the precursor of next *Dhatu*'.

The first three *Srotas* viz. *Pranavaha*, *Udakavaha* and *Annava* have their *Mulasthanas* as such organs which convert the *Bahya Prana* into body acceptable form and also helps in maintenance of them. Among *Dhatuvaha Srotas*, in most of the cases one

Srotomula does the function of providing nutrition to that *Dhatu* and the other *Mula* serves the controlling centre of that *Srotas*. In the context of *Malavaha Srotas*, among the two *Srotomulas* described one serves as the controlling place or the origin place and the other *Mula* carries the function of excretion. As in case of *Mutravaha*, *Pureeshavaha* and *Swedavaha Srotas*, *Basti*, *Pakvashaya* and *Meda* works as the controlling and Originating point respectively whereas *Medhra*, *Guda* and *Lomakupa* helps in the excretion of these *Srotas* respectively.

Though the science is advanced a lot but in Ayurveda there are still many things which are not fully explored yet especially regarding some of the organs like *Kloma*, *Vapavahana*, *Vrikka* etc. there is no unique opinion in Ayurvedic fraternity. Hence unless and until one has clear idea about these organs,

Table 1: Showing *Srotas* and their *Mula*

<i>Srotas</i>	<i>Mula</i>	
	Charaka	Sushruta
<i>Pranavaha</i> (channels of respiration)	<i>Hriday</i> (heart) <i>Mahasrotas</i> (abdomen)	<i>Hriday</i> , <i>Rasavahi dhamani</i>
<i>Annava</i> (alimentary channels)	<i>Amashaya</i> (stomach) <i>Vamaparshwa</i> (duodenum)	<i>Amashaya</i> , <i>Annavahi dhamani</i>
<i>Udakavaha</i> (channels of fluid distribution)	<i>Talu</i> (palate) <i>Kloma</i> (pancreas?)	<i>Talu</i> , <i>Kloma</i>
<i>Rasavaha</i> (Lymphatic channels)	<i>Hriday</i> , <i>Dashadhamani</i> (ten vessels)	<i>Hriday</i> , <i>Rasavahi dhamani</i>
<i>Raktavaha</i> (Vascular system channels)	<i>Yakrit</i> (liver) <i>Pleeha</i> (spleen)	<i>Yakrit</i> , <i>Pleeha</i> , <i>Raktavahi dhamani</i>
<i>Mamsavaha</i> (muscle tissue channels)	<i>Snayu</i> (ligaments) <i>Twak</i> (skin)	<i>Snayu</i> , <i>Twak</i> , <i>Raktavahi dhamani</i>
<i>Medovaha</i> (adipose tissue channels)	<i>Vrikka</i> (kidneys) <i>Vapavahana</i> (omentum?)	<i>Vrikka</i> , <i>Kati</i> (waist)
<i>Asthivaha</i> (bone tissue channels)	<i>Meda</i> (adipose tissue) <i>Jaghan</i> (buttocks)	
<i>Majjavaha</i> (marrow tissue channels)	<i>Asthi</i> (bones) <i>Sandhi</i> (joints)	
<i>Shukravaha</i> (reproductive tissue channels)	<i>Vrishan</i> (testicles) <i>Medhra</i> (penis)	<i>Vrishan</i> , <i>Stana</i> (breasts)
<i>Artavavaha</i> (uterine channels)		<i>Garbhashay</i> , <i>Artavavahi dhamani</i>
<i>Purishavaha</i> (Faeces transporting channels)	<i>Pakvashaya</i> (colon) <i>Sthoolaguda</i> (rectum)	<i>Pakvashaya</i> , <i>Guda</i> (anus)
<i>Mutravaha</i> (urine transporting channels)	<i>Basti</i> (bladder) <i>Vankshan</i> (groin)	<i>Basti</i> , <i>Medhra</i>
<i>Swedovaha</i> (sweat transporting channels)	<i>Meda</i> (adipose tissue) <i>Romakupa</i> (hair follicles)	

it is difficult to find the relation of these organs with their *Srotasas*.

CONCLUSION:

Srotomula is found to be the main functioning centre of particular *Srotas*. Any kind of vitiation of *Srotas* either directly or through its *Dhatu* leads to the vitiation of its *Mula* and when *Srotomula* is affected it leads to the vitiation of *Srotas*. Hence, it could be said that there is '*Samavaya Sambandha*' between *Srotas* and *Srotomula*. The term used '*Prabhavasthana*' used for *Srotomula* should be considered as either the origin place, storage place, controlling site conduction place, terminating place or site of manifestation for various *Srotasas*. *Acharya* Charaka has described the concept of *Srotomula* mainly from physiological point of view whereas Sushruta had given emphasis on the anatomical aspect of the *Srotomula*.

REFERENCES:

- [1] Sushruta, Sushrutasmhita, Acharya YT (editor), Sutrasthana 15/3, Reprint ed., Chaukhamba orientalia, Varanasi, 2009, p. 67
- [2] Agnivesha, Charaka, Charaksamhita, Acharya YT (editor), Sharirasthana 7/16, Reprint ed., Chaukhamba Surabharati Prakashana, Varanasi, 2011, p. 339
- [3] Ibid 2. Vimanasthana 5/8, p. 251
- [4] Deshapande A. et al., Srotomulam Vichara evam Raktavaha Moola Sthana Vivechanatmaka Abhyasa, PG dissertation, Dept. of Sharir, Nanded, 1995
- [5] M.K. Madankumar et al, Comprehensive study in the Mulasthana of Pranavaha and Rasavaha Srotas w.s.r. to applied aspect of Hriday, PG dissertation, dept. of Rachana Sharir, Alva's Ayurveda Medical college, Moodbidri, 2010
- [6] Deeja C.R. et al, A review on Pranavaha Srotomula Sthanas, IJAAR vol.1 issue 2 Nov-Dec. 2103
- [7] Pawar Pradeep Shivram et al, An analytical outlook of determination of the Mulasthana of Srotas, IRJP 2012, 3 (6)
- [8] Raja Radha Kanta dev, Shabdakalpadrum, Reprint edition, Vol.3, Choukhamba Sanskrit Series office, Varanasi, 2012, p. 761
- [9] Sir M. Monier-Williams, A Sanskrit English dictionary, 2nd edition, Bharatiya Grantha Niketan, New Delhi 2013, p. 826
- [10] Ibid 2. Vimanasthana 5/8, p. 251
- [11] Ibid 1. Sharirasthana 9/13, p. 387
- [12] Ibid 2. Vimanasthana 5/8, p. 250- 251
- [13] Ibid 1. Sharirasthana 9/12, p. 386
- [14] Ibid 1. Nidanasthana 3/20-24, p. 279
- [15] Sharangadhara, Sharangadhara Samhita, K.R. Shrikantha Murthy (editor), Purvakhanda 5/45, Reprint edition, Chaukhamba orientalia, Varanasi, 2012, p. 24
- [16] Ibid 2. Sutrasthana 28/3, p. 174
- [17] Vagbhata, Ashtangsamgraha, Shivaprasad Sharma (editor), Sharirasthana 6/26, 1st ed., Chaukhamba Sanskrit Series office, Varanasi, 2006, p. 314
- [18] Ibid 1. Sutrasthana 14/3, p. 59
- [19] Ibid 2. Chikitsasthana 26/78, p. 602
- [20] Ibid 2. Nidanasthana 3/7, p. 209
- [21] Ibid 2. Sutrasthana 17/101, p. 104
- [22] Ibid 2. Chikitsasthana 15/57, p. 517
- [23] Sushruta, B.G. Ghanekara, Sushruta Samhita Sharirasthanam (Ayurvedarahasyadipika Hindi Commentary), 16th edition, Meherchand Lachhmandas Publication, New Delhi, 2004.
- [24] Ibid 1. Sutrasthana 15/14, p. 70
- [25] Ibid 1. Sutrasthana 15/14, p. 70
- [26] Ibid 15. Purvakhanda 5/44, p. 24
- [27] Ibid 15. Purvakhanda 6/7, p. 28
- [28] Ibid 2. Chikitsasthana 15/57, p. 517
- [29] Ibid 2. Vimanasthana 5/8, p. 350
- [30] Ibid 2. Sutrasthana 17/64, p. 103
- [31] Ibid 1. Sutrasthana 15/14, p. 70
- [32] Ibid 2. Sutrasthana 28/14, p. 179
- [33] Ibid 2. Sutrasthana 17/64, p. 103
- [34] Vagbhata, Ashtangahriday, AM Kunte (editor), Sutrasthana 11/18, Reprint ed., Chaukhamba Sanskrit Sansthana, Varanasi, 2009, p. 185
- [35] Ibid 1. Sutrasthana 15/9, p. 69
- [36] Ibid 1. Sutrasthana 15/9, p. 69
- [37] Ibid 1. Sutrasthana 15/9-15, p. 69&70
- [38] Vagbhata, Ashtangahriday, AM Kunte (editor), Sutrasthana 11/22, Reprint ed., Chaukhamba Sanskrit Sansthana, Varanasi, 2009, p. 186