



## CONCEPTUAL SIGNIFICANCE OF SROTAS

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### ABSTRACTS

The principles of *Ayurveda* are based on experimental studies of several years. Several *Acharyas* have tested these principles for many years and then these principles have got a place in *Ayurvedic Samhitas*. In our *Samhita* one of important principle is *srotas*. In *Ayurveda*, the concept of *srotas* has been propagated very specifically. Body is composed of numerous *srotas*, which have a significant role in the maintenance of the equilibrium of body elements. They are responsible for the maintenance of health as well as for the diseased condition. The *srotas* are derivatives or modifications of the *pancha mahabhuta*, especially *aakasha mahabhuta*. If considered physiologically, *Srotas* is the channel through which different elements undergo transformation, transmutation, circulation and transportation. The *srotas* is an integral part of the body, serving as a route to conduct or convey a substance from one place to other. Another concept of *srotas* is its microscopic description. Their functions include nourishment, circulation, excretion and reproduction. In brief, the concept of *srotas* includes microscopic, macroscopic, anatomical, physiological and pathological consideration. *Charakacharya* has laid more stress to understand and explain the *srotas* and their role in the maintenance and in health of bringing out a pathological condition. The term “*srotas*” finds mention in various other contemporary & prior literatures in various contents. It is beneficial to various instances of term usage for a better understanding In this reviewed article we will detailed discussion about *srotas* their types, importance, functions etc.

**KEYWORDS:** *Srotas*, transformation, *aakasha*, circulation.

### INTRODUCTION

#### Description of *Srotas*

##### *Srotas*

The word “*srotas*” has been derived from the word root “*su sravane*” meaning to ooze, to exude, to filter, and to permeate. This view is supported by the root meaning of *ayana* i.e. “*en- gatau*” meaning as to move or to go and *mukha* i.e. “*mukha-moksane*” to leave or to let free.

#### Term Used For Synonyms of *Srotas*

“*Paryayas*” or Synonyms are indicative of a word’s other functional aspects other than those indicated by the word itself. In this light, let us look at the various synonyms of *srotasa* & general meaning they hold. *Srotamsi* as derived before, a *srotasa* is a pathway into which “*sravana karma*” occurs.

According to *Chakrapanidatta* “*paryayas*” i.e. synonyms of *srotas* for general usage.<sup>[1]</sup>

- *Srotamsi*: - openings, meatus, passages, channels.
- *Sira*: - Veins
- *Dhamanis*: - Arteries

- *Rasayanis*: - Nutrient vessels & lymphatic’s.
- *Rasavahinya*: - Nutrient vessels & Capillaries.
- *Nadya*: - Vessels, Cords, Meatus, Canal, Tube, Nerve
- *Panthan*: - Channels
- *Marga*: - Tracts, Passages
- *Sharirachidra*: - opening apparatus, body orifices
- *Samvritta Samvritani*: - External or Internal apertures or passages of the body.
- *Sthanani*: - means sites, locus, bladder, organ
- *Ashayas*: - Spaces
- *Niketa*: - Resorts
- *Shariradhatwakashanam* – Visible & Non Visible empty spaces in the tissues & their cells.

*Vagbhata* has added “*ksaya*”, “*jivitatatna*” & “*dvarani*” as other synonyms of *srotas*.<sup>[2]</sup> The above synonyms are used for both perceptible & imperceptible channels that afford to provide passage for the movement of body tissues. A part from this *ayana*, *hira*, *yan* is also sometimes used as synonyms of *srotas*.<sup>[3]</sup>

The term “*ayanamukha*” has been used by Charak & is explained by Chakrapanidatta.<sup>[4]</sup> This term is composed of two words that is- *ayana* and *mukha*- meaning channels and openings or pores respectively. Chakrapani Dutta in interpreting the term *aynani* has observed that this term refers to the channels through which the materials travels and *mukhani* to the opening or pores present in the former, through which materials enter and exits. Hence the channels and openings are not different entities and the same channel serves as the common conduit for the transport of both *prasad* (nutrients) and *malas* (waste products).

### Definition of Srotas

According to Charak *srotas* is defined as the channel or structure through which *sraavanam karma*<sup>[5]</sup> i.e. flowing, moving, oozing & permeation of different constituents & nutrients of the body takes place Charak again describes *srotas* as the channels of circulation which carry the transforming (“*parinamapadhapananama*”) tissues from one place to another places.<sup>[6]</sup> They work as communicating channels for nutrient tissues/ temporary tissues (*asthaya dhatus*) which are to be utilized for formation of permanent *dhatus* (*sthaya dhatus*). They also carry the *prana*, *udaka* & also the three types of *malas*.<sup>[7]</sup>

*Susruta* describes that *srotas* are the channels of the body having originated from vacant spaces (hollow organs) spread throughout the body, but at the same time they are different from *sira* & *dhamanis*,<sup>[7]</sup> & compared the *srotas* with the fine channels present in the stem of lotus, through which water & nutrients circulates & exude.<sup>[9]</sup>

*Dalhana* the acknowledge commentator of *Susruta samhita* has accepted in his commentary that all the structures through which *prana*, *anna*, *udaka*, *rasa*, *rakta*, *mamsa*, *medo* etc circulates are called *srotas*.<sup>[10]</sup>

*Vagbhatta* has compared *srotas* with extremely fine passages & pore present in the stem of a lotus flower. He observes that *rasa* spreads throughout the body through very fine *dwaras* (pores) of *srotamsi* which are distributed extensively in the body very much like minute channels present in the lotus stem.<sup>[11]</sup>

### Sharangadhar

According to *Sharangadhar*, all the *margas* (passage) through which *manas*, *prana*, *anna*, *udaka*, *doshas*, *dhatus*, *updhatus*, *malas* are transported in the body are known as *srotas*.<sup>[12]</sup>

### Acharya priya vratt sharma

Emphasises on the important role of *srotas* in the body metabolism in his famous work *Sodasangahradyam* (Essentials of *Ayurveda*). He says that the channels in the form of tracts, vein & arteries etc. are known as *srotas* which are also called as “*kha*” (empty space) he differentiates *asaya* from *srotas* which are said to be visceral organs where food, *doshas*, *malas* are located

where as *srotas* are the channels/ connecting links through which they are transported properly through its channel. Thus *srotas* play important role in *dhatupaka* (metabolism).<sup>[13]</sup>

### Classification of Srotas

In *Ayurved Samhitas*, two main views about the number of *srotas* are available.<sup>[14]</sup>

1. Innumerable
2. Numerable

*Srotas* have been classified in different ways keeping many points of view.

1. *Drishya* (seen) which are visualized by necked eye and its apposite are *adrishya* (unseen).
2. *Sthula* (gross or macroscopic) and *Sukshma* (microscopic).<sup>[15]</sup>
3. *Urdhva Srotas* (channels in upper portion of the body) and *Adhoh Srotas* (channels in lower portion of the body).<sup>[16]</sup>
4. *Bahirmukha Srotas* (external opening of the body) and *antarmukha srotas* (internal opening of the body).
5. According to *Doshas* (based on *doshas*).
  - A. *Vatavaha Srotas*.
  - B. *Pittavaha Srotas*
  - C. *Kaphavaha Srotas*
  6. *Dhatuvaha Srotas*- these are the carriers of *sapta-dhatus*.
    - A. *Rasavaha Srotas*
    - B. *Raktavaha Srotas*
    - C. *Mamsavaha Srotas*
    - D. *Medovaha Srotas*
    - E. *Asthivaha Srotas*
    - F. *Majjavaha Srotas*
    - G. *Shukravaha Srotas*
    7. *Malavaha Srotas*<sup>[17]</sup>
      - A. *Mutravaha Srotas*
      - B. *Purishavaha Srotas*
      - C. *Swedavaha Srotas*
      8. *Maha Srotas* - this *srotas* is extended from buccal cavity to anus and also known as central system, *maha nimna* (deepest part of the body), *sharir madhya* (central part of the body), *ama-pakwashya* (between stomach and intestine).
      9. *Abhyanter Rogamarga* (internal path of disease) and *Bahya rogamarga* (external path of disease).<sup>[18]</sup>
      10. *Srotas* indicating organs in the body:-
        - A. *Karna Srotas* (auditory canal).
        - B. *Nasa Srotas* (nasal canal).
        - C. *Stanya Srotas* (Lacteal of the breast).
        - D. *Yonikarnika Srotas* (pudendal clefts).
        - E. *Mushka Srotas* (testicular vessels, spermatic cord).
        - F. *Phala Srotas* (oviduct, fallopian tubes).
        - G. *Urah Srotas*.
      11. Some other *Srotas*
        1. *Shabdavaha Srotas*.
        2. *Sangyavaha Srotas*.

3. *Loamkoop Srotas*.
4. *Marma Srotas*.
5. *Manovaha Srotas*.
6. *Ashruvaha Srotas*.

According to *Charak*, the specific varieties of the channels of circulation in the human body are the same in number as the structural entities of it. Therefore the *srotasa* are innumerable, but the thirteen main *srotas* describing their site of origin and causes of vitiation, which are given below.<sup>[19]</sup>

1. *Pranavaha Srotas* (channels of respiration)
2. *Udakavaha Srotas* (channels of fluid or water canals distribution)
3. *Annavaha Srotas*
4. *Rasavaha Srotas* (lymphatic canal)
5. *Raktavaha Srotas* (vascular system)
6. *Mamsavaha Srotas* (channels through which nutrition to muscular tissue transported)
7. *Medovaha Srotas* (channels through adipose tissue is transported)
8. *Asthivaha Srotas* (channels of bone tissue is transported)
9. *Majjavaha Srotas* (channels through which nutrients to marrow tissue are transported)
10. *Shukravaha Srotas*
11. *Mutravaha Srotas* (channels through which urine is transported)
12. *Purishavaha Srotas* (channels through which feces is transported)
13. *Swedavaha Srotas* (channels through which sweat is transported)

*Acharya Sushrut* has furnished eleven pairs of *srotas* especially in the context of injury and has mentioned symptoms of piercing at its root as below.<sup>[20]</sup>

1. *Pranavaha Srotas*
2. *Annavaha Srotas*
3. *Udakavaha Srotas*
4. *Rasavaha Srotas*
5. *Raktavaha Srotas*
6. *Mamsavaha Srotas*
7. *Medovaha Srotas*
8. *Mutravaha Srotas*
9. *Purishavaha Srotas*
10. *Shukravaha Srotas*
11. *Artavavaha Srotas*

*Sushrut* has omitted the *asthi*, *majja* and *swedavaha srotas* in his counting. Clarifying the different modes of approach made to *srotas*, by *Shalya Tantra* (surgery) and *Kayachikitsa* (internal medicine) *Dalhan* has observed the special kind of pain (*vedana vishesh*) exhibited in case of *srotodushti* (pathological involvement of *srotas*). *Srotamsi* being spread throughout the body are important from the *Kayachikitsa* (internal medicine) point of view; on other hand, pains of special kind, which may manifest on account of either the piercing of or injury to *srotas* present in certain special parts of the body, are important to gain knowledge of the prognosis of such conditions. On the contrary, *Kayachikitsa* (internal medicine) recognizes *srotas*, which are spread throughout the body and which include extremely fine one. Any pathological involvement of them may manifest subtle kinds of pains, which may not be recognized or to be help in assessment of prognosis in such involvement.

### Main Srotasa and Its Mulas

S. No.	Name of Srotas	CHARAK <sup>[21]</sup> Mula	SUSHRUT <sup>[22]</sup> Mula	VAGBHATTA <sup>[23]</sup> Mula
1	<i>Pranavaha Srotas</i>	<i>Hridaya and Maha Srotas</i>	<i>Hridaya and Rasavahi Dhamanis</i>	<i>Hridaya and Maha Srotas</i>
2	<i>Udakavaha Srotas</i>	<i>Talu and Kloma</i>	<i>Talu and Kloma</i>	<i>Talu and Kloma</i>
3	<i>Annavaha Srotas</i>	<i>Amashaya and Vamaparshva</i>	<i>Amashaya and Annavahi Dhamanis</i>	<i>Amashaya and Vamaparshva</i>
4	<i>Rasavaha Srotas</i>	<i>Hridaya and Ten Dhamanis</i>	<i>Hridaya and Rasavahi Dhamanis</i>	<i>Hridaya and Ten Dhamanis</i>
5	<i>Raktavaha Srotas</i>	<i>Yakrit and Pleeha</i>	<i>Yakrit, Pleeha and Raktavahi Dhamanis</i>	<i>Yakrit and Pleeha</i>
6	<i>Mamsavaha Srotas</i>	<i>Snayu and Twacha</i>	<i>Snayu, Twacha and Raktavahi Dhamanis</i>	<i>Snayu and Twacha</i>
7	<i>Medovaha Srotas</i>	<i>Vrikka and Vapavahan</i>	<i>Kati and Vrikka</i>	<i>Vrikka and Mamsa</i>
8	<i>Asthivaha Srotas</i>	<i>Meda and Jaghana Pradesha</i>	—	<i>Meda &amp; Jaghana Pradesha</i>
9	<i>Majjavaha Srotas</i>	<i>Asthi and Sandhi</i>	—	<i>Asthi and Parva</i>
10	<i>Shukravaha Srotas</i>	<i>Vrishan and Shepha</i>	<i>Stan and Vrishana</i>	<i>Stana, Mushka and Majja</i>
11	<i>Mutravaha Srotas</i>	<i>Basti and Vankshana</i>	<i>Basti and Mendra</i>	<i>Basti and Vankshana</i>
12	<i>Purishvaha Srotas</i>	<i>Pakwashaya and Sthul Guda</i>	<i>Guda and Pakwashaya</i>	<i>Pakwashaya and Sthulantra</i>
13	<i>Swedavaha Srotas</i>	<i>Meda and Lomakoopa</i>	—	<i>Meda and Lomakoopa</i>
14	<i>Artavavaha Srotas</i>	—	<i>Garbhashaya and Artavavahini Dhamanis</i>	—

### Structure & Morphology of Srotas

According to *Acharya Charak*, *srotasa* have their colour similar to that of the *dhatu* transported through it. *srotas* may be cylindrical, *sthula* (gross or macroscopic) or *anu* (atomic in size or microscopic), *dirgha* (large) or *pratan* (reticulated) in shape.<sup>[24]</sup> *Sushrut* has differentiated them from *siras* (veins) and *dhamanis* (arteries), which latter may otherwise resemble them. *dhamanis* have *kha* (pores), (*kha*) in their walls, through which they supply

*rasa* to all the part of body, very much like the minute passages present in a lotus stem.<sup>[25]</sup> *Vagbhatta* has compared *srotas* to the extremely fine passages and pores present in the lotus stem. He observed that, *rasa* spreads throughout the body through very fine *dwaras* (pores) of *srotas*, which are distributed extensively in the body, very much like the minute channels, present in the lotus stem.<sup>[26]</sup>

### Process of Formation of Srotas

According to *Acharya Charaka* *vayu* creates the gross & subtle channels which are dominated by *akasha mahabhuta*.<sup>[27]</sup> *Bhedana* (splitting) is the function of *vayu* which is responsible for formation of *srotas*.<sup>[28]</sup> *Acharya Susruta* describes it as *vata* with the help of *ushma* is responsible for the formation of *srotas*. *Dalhana* in his commentary on above description clarifies that *pitta* combined with *vayu* is responsible for formation of *srotas* by the act of *daarana* (separation).<sup>[29]</sup> *Bhava Prakash* has also described the process of formation of *srotas* in the foetal life. He states that there permanent *vyotisthana* in the centre of umbilicus where the *vata* produces throbbing, helping the body to grow, *vata* associated with *ushma* expand in upward, downward & sideward to form the *srotas* (Channels) of the body.

### Functions & Importance of Srotas

- All the body structure entities are originated from *srotas*.
- *Srotas* carry the *dhatu*s (tissues) elements & their constituents undergoing transformation to their destination.
- *Srotas* maintains the structural entities of the body & to prevent them to diminish.
- *Mana, prana, anna, udaka, vata, pitta, kapha, rasa, rakta, mamsa, meda, asthi, majja, sukra dhatu, stanyadi updhatu, mala, mutra & purisha* are transported in the body through *srotas*.<sup>[30]</sup>
- Development & nourishment of different *bhavas* of the body is not possible without *Srotas*.
- They carry sensory & motor impulses for the body.
- The *srotas* in abnormal condition not only deteriorates the state of *dhatu* but also causes abnormality in the functioning of nearby *srotas* leading to local disorders like *pratisyaya* affects nasal cavity & pharynx, leading to *kasa* & vice versa. The infection from there may enter the ear causing pain & deafness. If the infection enters the air sinuses it may cause severe headache.<sup>[41]</sup>
- Due to morbidity of *srotas*, the *sthaiy dhatu* whether in passage (under the process of transformation) also get affected likewise morbidity of other *srotas* affect respective contents. Thus the functions performed by the *srotas* at different places in the body are carried out by various structures of the body like:-
  - *Grahana Karma* (to Store) - Specific function of sinuses of liver.
  - *Sravana Karma* (to Secrete) - all membranes of the body.
  - *Sosana Karma* (to absorb) – Absorption of digested food is carried out by mucus membrane of small intestine, water & electrolyte absorption is carried out by mucus membrane of Large Intestine.
  - *Vivechana* ( Selectivity) – membranes of kidney & duodenum
  - *Nisravana Karma* (Elimination) – from nose, eyes & urinary tract etc.
  - *Pachana Karma* (Digestion) – mucus membrane of stomach.

- *Poshana Karma* (Nutrition) – membranes of blood vessels & lymphatics.
- *Vahana Karma* (to carry) – membranes of all ducts.

### REFERENCES

1. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Vimansthana; chapter 5, verse 1 Chaukhamba Surbharati Prakashan, Varanasi: Revised Edition, 2008; 249. (Introduction to *kaya Chikitsa* by C. Dwarakanath.
2. Edited by Pt. Hari Sadasiva Sastri Paradakara: Vagbhata: *Astanga Hridaya: Sarvangasundara* Commentary by Arunadatta: Sharirasthana Chapter 3 verse 41: Chaukhamba Surbharati Prakashan, Varanasi: Edition, 2014; 393.
3. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Sutrasthana; chapter 7, verse 42 Chaukhamba Surbharati Prakashan, Varanasi: Revised Edition, 2008; 50.
4. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Sutrasthana; chapter 28, verse 5 Chaukhamba Surbharati Prakashan, Varanasi: Revised Edition, 2008; 177.
5. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Sutrasthana; chapter 30, verse 12 Chaukhamba Surbharati Prakashan, Varanasi: Revised Edition, 2008; 185.
6. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Vimansthana; chapter 5, verse 3 Chaukhamba Surbharati Prakashan, Varanasi: Revised Edition, 2008; 249.
7. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Vimansthana; chapter 5, verse 3 Chaukhamba Surbharati Prakashan, Varanasi: Revised Edition, 2008; 249.
8. Edited by Vaidya Jadavji Trikamji Acharya: *Susruta Samhita: Nibandhasangraha* Commentary by Sri Dalhanacharya: Sharirasthana; chapter 9, verse 13: Chaukhamba Surbharati Prakashan, Varanasi: Reprint, 2008; 387.
9. Edited by Vaidya Jadavji Trikamji Acharya: *Susruta Samhita: Nibandhasangraha* Commentary by Sri Dalhanacharya: Sharirasthana; chapter 9, verse 13: Chaukhamba Surbharati Prakashan, Varanasi: Reprint, 2008; 387.
10. Edited by Vaidya Jadavji Trikamji Acharya: *Susruta Samhita: Nibandhasangraha* Commentary by Sri Dalhanacharya: Sharirasthana; chapter 9, verse 13: Chaukhamba Surbharati Prakashan, Varanasi: Reprint, 2008; 387.
11. Edited by Pt. Hari Sadasiva Sastri Paradakara: Vagbhata: *Astanga Hridaya: Sarvangasundara* Commentary by Arunadatta: Sharirasthana Chapter

- 3 verse 46: Chaukhambha Surbharati Prakashan, Varanasi: Edition, 2014; 393.
12. Bhramanad Tripathi; Sharangdhar Samhita; Purvkhanda: Chapter 5 verse 44: Chaukhambha Surbharati Prakashan, Varanasi: Edition, 2017; 42.
  13. Prof. P.V. Sharma; Essentials of Ayurveda Text and Translation of Sadasanghradyam; Sharirasthana Chapter 84, verse 85 Motilal Banarsidass Publication: Edition, 2000; 250.
  14. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Vimansthana; chapter 5, verse 3 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 249.
  15. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Chikitsasthana; chapter 18, verse 6 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 540.
  16. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Nidansthana; chapter 2, verse 8 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 206.
  17. Edited by Pt. Hari Sadasiva Sastri Paradakara: Vagbhata: Astanga Hridaya: Sarvangasundara Commentary by Arunadatta: Sharirasthana Chapter 3 verse 16: Chaukhambha Surbharati Prakashan, Varanasi: Edition, 2014; 380.
  18. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Sutrasthana; chapter 11, verse 71 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 77.
  19. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Vimansthana; chapter 5, verse 6 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 249.
  20. Edited by Vaidya Jadavji Trikamji Acharya; Susruta: Susruta Samhita: Nibandhasangraha Commentary by Sri Dalhanacharya: Sharirasthana; chapter 9, verse 12: Chaukhambha Surbharati Prakashan, Varanasi: Reprint, 2008; 386.
  21. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Vimansthana; chapter 5, verse 6-7 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 249.
  22. Edited by Vaidya Jadavji Trikamji Acharya; Susruta: Susruta Samhita: Nibandhasangraha Commentary by Sri Dalhanacharya: Sharirasthana; chapter 9, verse 12: Chaukhambha Surbharati Prakashan, Varanasi: Reprint, 2008; 386.
  23. Edited by Pt. Hari Sadasiva Sastri Paradakara: Vagbhata: Astanga Hridaya: Sarvangasundara Commentary by Arunadatta: Sharirasthana Chapter 3 verse 46: Chaukhambha Surbharati Prakashan, Varanasi: Edition, 2014; 393.
  24. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Vimansthana; chapter 5, verse 25 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 252.
  25. Edited by Vaidya Jadavji Trikamji Acharya; Susruta: Susruta Samhita: Nibandhasangraha Commentary by Sri Dalhanacharya: Sharirasthana; chapter 9, verse 10: Chaukhambha Surbharati Prakashan, Varanasi: Reprint, 2008; 385.
  26. Edited by Pt. Hari Sadasiva Sastri Paradakara: Vagbhata: Astanga Hridaya: Sarvangasundara Commentary by Arunadatta: Sharirasthana Chapter 3 verse 46: Chaukhambha Surbharati Prakashan, Varanasi: Edition, 2014; 393.
  27. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Sharirasthana; chapter 7, verse 16 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 339.
  28. Edited by Vaidya Jadavji Trikamji Acharya; Susruta: Susruta Samhita: Nibandhasangraha Commentary by Sri Dalhanacharya: Sharirasthana; chapter 4, verse 28: Chaukhambha Surbharati Prakashan, Varanasi: Reprint, 2008; 357.
  29. Edited by Vaidya Jadavji Trikamji Acharya; Susruta: Susruta Samhita: Nibandhasangraha Commentary by Sri Dalhanacharya: Sharirasthana; chapter 4, verse 28: Chaukhambha Surbharati Prakashan, Varanasi: Reprint, 2008; 357.
  30. Edited by Vaidya Jadavji Trikamji Acharya; Agnivesa: Charaka Samhita: *Ayurvedadipika* Commentary by Chakrapanidatta: Sutrasthana; chapter 28, verse 5 Chaukhambha Surbharati Prakashan, Varanasi: Revised Edition, 2008; 177.