JETIR.ORG

ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue



JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Critical analysis of Samanya Strotodushti Lakshana with special reference to Raktavaha strotasa.

¹Dr.Vasundhara Chandrakant Mulepatil

²Dr.Rajesh Vithalrao Sawai

³Dr.Snehal Alde

¹PG Scholar, Sanskrit Samhita Department, Government Ayurvedic College, Nanded, Maharashtra- 431601

²Guide,HOD and Professor, Sanskrit Samhita Siddhant Department, Government Ayurvedic College, Nanded, Maharashtra- 431601

³Assistant Professor Sanskrit Samhita Siddha<mark>nt De</mark>partment, Government Ayurvedic College, Nanded,
Maharashtra- 43160

ABSTRACT

Knowledge about Strotasa is important to achieve prime objective of vikara prashamana (Treatment of vyadhi).

As the abnormal functioning of strotasa leads to imbalance of Bhava padartha which leads to vyadhi.

The present study aims to critically analyse Samanya Srotodushti Lakshana with special reference to Raktavaha Srotas, in order to understand their role in the pathophysiology and management of Rakta Pradoshaja Vikara. The objectives include reviewing the Ayurvedic concept of Srotas and their dushti, correlating the four types of Samanya Strotodushti Lakshana—Atipravrutti, Sanga, Sira-Granthi, and Vimarga-gamana—with classical descriptions of Raktavaha Srotodushti Lakshana, interpreting the pathogenesis of Rakta Pradoshaja Vikara through this correlation, and exploring treatment principles based on Nidana Parivarjana, Samprapti Bhanga, and Chikitsa Sutra.

A detailed literary review of classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya was undertaken. Analysis revealed that most Raktavaha Srotodushti Lakshana such as Kustha, Visarpa, Vidradhi, Kamala, Raktapitta, and Asrukdara can be systematically categorised under Samanya Srotodushti patterns, with Sanga being predominant, followed by Atipravrutti and Sira-Granthi, while Vimarga-gamana is observed across all types. This categorisation provides a clearer understanding of the Samprapti of Rakta Pradoshaja Vikara, thereby aiding in precise diagnosis and targeted therapeutic interventions.

Keywords- Strotasa, Samanya Strotodushti Lakshana, Raktavaha Strotasa, Raktadushti, Rakta Pradoshaja Vikara, Ayurvedic Pathophysiology, Samprapti

INTRODUCTION

In Ayurveda, the concept of Strotasa provides a unique perspective on the anatomical and physiological channels of the human body, essential for the transport and transformation of vital substances. When these channels are disturbed, Srotodushti occurs, leading to imbalance of Bhava Padartha and manifestation of disease. Among them, Raktavaha Srotas play a critical role in maintaining the health of Raktadhatu, and their vitiation results in various Rakta Pradoshaja Vikara.

The present study aims to critically analyse the Samanya Strotodushti Lakshana—Atipravrutti, Sanga, Sira-Granthi, and Vimarga-gamana—with special reference to their correlation to Raktavaha Strotodushti Lakshana. The objectives are to review classical Ayurvedic literature for definitions, classifications, hetu, and lakshana of Raktavaha Srotas, to categorise these specific lakshana under the framework of Samanya Srotodushti, and to interpret the Samprapti of Rakta Pradoshaja Vikara for clinical application. This study is based on a detailed textual analysis of authoritative Ayurvedic treatises, including Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya, along with relevant commentaries, to establish a systematic understanding of the relationship between general and specific Srotodushti features.

MATERIALS

The present study is a literary research work based on qualitative analysis of classical Ayurvedic texts. Primary data were collected from Brihatrayi—Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya—along with their authoritative commentaries, other classical Ayurvedic treatises were also compiled. Secondary data were obtained from contemporary research articles, Ayurvedic compendia, and standard textbooks.

METHODOLOGY

The methodology involved systematic review and categorisation of textual references related to Samanya Srotodushti Lakshana and Raktavaha Srotodushti Lakshana. Each lakshana was identified, extracted, and classified under the headings of Atipravrutti, Sanga, Sira-Granthi, and Vimargagaman. Comparative analysis was then performed to determine correlations between general Srotodushti features and those specific to Raktavaha Srotas. Samprapti Ghatakas, and classical Ayurvedic diagnostic frameworks to derive clinically relevant conclusions.

REVIEW OF LITRATURE

OPERATIONAL DEFINITION

1.Strotas -

Strotasa is that entity where, Utpatti (Progress), Parinamana (Changes), Karya (Working), Abhivyakti (Presence) and Vinasha (Termination) of a Bhavavishesha means feasible entity occurs.

2. Raktadushti

Raktadushti is considered when the natural functions of Rakta (blood tissue) are impaired, and the condition does not get relieved either by cold (sheet) or hot (ushna) line of treatment. In such cases, when neither ushna nor sheeta chikitsa gives proper relief, the pathology is understood as vitiation of Rakta.

3. Srotodushti

Srotodushti is the pathological vitiation or impairment of the body channels (srotas), leading to obstruction, dilatation, narrowing, or improper functioning of the normal transport and transformation processes.

Literature

It is estimated that around 5 to 10% of consultations in general practice involve a skin problem. Eating food during indigestion and when previously food is not digested, use of contraindicated items like cakes, raw sugar, milk, and use of rice that is new, card, fish, salt and things that are sour are very common. These vitiate tridosha (physiological constituents of human body). They affect Twak (skin), Rakta (blood), Mamsa (muscles), Ambu(watery substance that lies in skin) of body. These seven are pathogenic materials of skin disorders. This is the root cause behind the development of skin diseases. The skin diseases are quoted innumerable; Ayurveda deals with skin diseases very scientifically tries to avoid the causes it treat them by braking the pathogenesis of disease.

Raktapitta also called as mahagada (having severe intensity of heavy bleeding) and sheeghrakari (have potential to destroy body very quickly) Therefore a wise physician should have accurate knowledge of pathogenesis of raktapitta.

Most of the skin disorders & some diseases like raktapitta, asrukadara comes under the umbrella term of raktavaha stroto dushti .These are raktavaha stroto dushti Lakshana elaboration of these diseases in terms of samanya stroto dushti lakshana can give us clear view of pathogenesis of these disease which in terms will be helpful in treatment.

Strotasa Definition –

स्रोतांसिखलुपरिणाममापद्यमानानां धातुनामभिवाहीनिभवन्त्ययनार्थेन । (च.वि. ५/३)।

Strotasa is that entity where, Utpatti (Progress), Parinamana (Changes), Karya (Working), Abhivyakti (Presence) and Vinasha (Termination) of a Bhavavishesha means feasible entity occurs.

Strotasa synonyms-

Acharya Charaka has mentioned the synonyms of Srotas are Srotansi, Sira, Dhamani, Rasayani, Rasayahini, Nadi, Panth, Marga, Shariracchidra, Samvrit, Asamvrita, Sthana, Ashaya and Niketa.²

Acharya Vagabhat has described synonym of Srotas also. Those are Srotansi, Sira, Dhamani, Rasavahini, Nadi, Panth, Ayna, Marga, Shariracchidra, Samvrit, Asamvrita, Sthana, Ashyayaand Niketa.³

Strotasa sankhya-

Acharya's	Strotasa
1.Charaka	13 Strotasa ⁴
2.Sushruta	Bahirmukha -9 in male &12 in female, Aantarmukha-11 pairs. 5
3.Ashtanga Hridaya	Bahirmukha -9 in male &12 in female, Aantarmukha-136
4.Sharangdhar Bahirmukha	10 in male &13 in female. ⁷

Strotasa granthokta importance-

Numerous feasible entities, known as Bhavavisheshas, continuously circulate within the body. According to the Acharya, each entity within the body has its own subtle pathway called "Srotasa". When a feasible entity, referred to as Murtimanta Bhavavishesha, has a structure (Murti), it flows through these specific Srotasas.

Rakta importance -Raktadhatu is extremely important for sustenance of life. It is therefore needed to protect this Dhatu by every possible measure. As Vata Pitta Kapha are responsible for creation of living body fourth entity named Raktadhatu also takes part in origin, sustaining it and are responsible for death.

Raktavaha strotasa mulasthana-

The mulasthana of are two Raktavaha srotas are liver, spleen and Raktavaha Dhamanyah.. Besides liver and spleen, this compendium added in moolasthana- vessels conveying rakta dhaatu.

Raktavaha stroto dushti Hetu-

Vidahi anapan, Snigdha, ushna, and drava in nature, and those that are impure or contaminated, spoil the blood. Therefore, those who desire health should avoid such foods, especially when exposed to the sun or heat."

These Hetu are dosh guna Sama that is pitta prakopkara and dhatubhi viguna that is which hampers the production of rakta.¹¹

Samanya stroto dushti Lakshana-

अतिप्रवृत्तिः सङ्गो वा सिराणां ग्रन्थयोऽपि वा । विमार्गगमनं चापि स्रोतसां दृष्टिलक्षणम्।।(च.वि 5/24)🛭

Srotodushti Prakara:

- 1. Atipravrutti
- 2. Sanga
- 3. Sira-granthi
- 4. Vimarga-gamana.

1) Atipravrutti –

Atipravrutti, which refers to the excessive activity or hyperfunctioning of the Srotas (channels or pathways in the body), leads to an increase in the normal functions of these channels. This excessive activity can result in an increased flow or circulation of bodily fluids, which disrupts the balance of the body's physiology. The vitiation of the Srotas often produces various diseases.

2) Sanga-

The Sanga means stop of flow or obstruction. It is also called Srotorodha, the substances which causes obstruction of stoats.

such as: Mala, Ama, Krimi, Kapha, Lasika and Pus etc. produces anatomical and physiological structural abnormalities of Srotas.

3)Siragranthi-

The term Siragranthi refers to the formation or dilation of glands within the Srotas, the channels or pathways of the body. These formations occur when there is an obstruction in the flow through these channels, leading to a build-up or accumulation of substances, such as blood, in the affected areas. The size of the Granthi (gland) depends on the type of Srotas involved and the specific tissue (Dhatu) affected.

4)Vimargamana-

Vimargagaman refers to the abnormal or deviated movement of the contents of the Srotas (bodily channels) outside their natural pathways. In Ayurveda, the Srotas are channels through which substances like Doshas, Dhatus (tissues), and Malas (waste products) flow, and they have specific, defined pathways. When these substances do not follow their designated paths but instead move through other, abnormal pathways, it is called Vimargagaman.

Raktavaha stroto dushti Lakshana-

कुष्ठवीसर्पपिडका रक्तपित्तमसृग्दरः ॥११॥
गुदमेद्रास्यपाकश्च प्लीहा गुल्मोऽथ विद्रधिः ।
नीलिका कामला व्यङ्गः पिप्प्लवस्तिलकालकाः ॥१२॥
दद्रुश्वर्मदलं श्वित्रं पामा कोठास्रमण्डलम् ।

Raktavaha strotodusti lakshana are as follows

रक्तप्रदोषाज्जायन्ते।((च.वि 28/11)🛭

Kustha (skin disease), visarpa (Erysipelas),Pidaka (pimples),Raktapitta (haemolytic disorder),Asrikadra(Menstrual disorder),Gudapaka (Inflammation of anus),Medhrapaka (Inflammation of penis),Pleeharoga(Spleenomegaly),Gulma (abdominal tumor),

Vidradhi (abseces), Nilika (Bluishness), Kamala (Jaundice), Vyanga (Dark shade), Pipalava (port wine mark), Tilakalaka (Birth mark), Dadru (Ringworm), Charmadala (Dermatitis), shwitra (Leucoderma), Pama (Papules), kotha (Urticaria), Rakta - Madal (Red circular patches).

Discussion

Analysis of Raktavaha stroto dushti lakashana in terms of samanya stroto Dushti lakshana-

1.Kustha

According to Aacharya charaka, Nidan sevana leads to prakopa of tridosha & thus viated doshas get situated in twak, rakta, mamsa and ambu causing the shithilata in these dhatus (Decrease the consistency of dhatus) leading to manifestation of kustha roga, here Kustha comes under the sanga of samanya stroto dushti lakshana.

2. Visarpa

When pitta aggrevates along with rakta take aashraya in skin, It spreads and generates shotha (swelling) and raga (redness).

Here Sanga & granthi seen in samprati of visarpa.

3. Pidaka-

According to chakrapani visarpa and pidaka have similar samprati only difference is that in visarpa dosha spread in twak and rakta while in pidaka they get accumulated in twaka & rakta, So Here sanga& granthi seen in pidaka also.

4. Raktapitta-

Due to various etiological factors, Pitta Dosha gets aggravate, leaves its site and reaches Rakta Dhatu (blood). Being a Mala (waste product) of Rakta Dhatu, the Pitta Dosha on get mixed with Rakta Dhatu attains increase in its quantity. The Pitta Dosha in turn vitiates the Rakta. Due to the Ushnatva of Pitta, The liquid portion of dhatu like. Mamsa (muscles), Meda (fat) etc. oozes out of their respective tissues and gets mixed with Rakta Dhatu. So This further enhances the quantity of blood flowing in the blood vessels creating immense pressure. Due to the pressure of the blood and Ushnatva of Pitta, the walls of the blood vessels get damaged and the blood starts flowing through various openings of the body like mouth, nose, ears, skin, anus, penis and vagina. Here raktapitta comes under the Atipravruti of samanya Strotodushti lakshana.

5. Asrukdara-

Due to various etiological factors, aggravated Vata affects uterine vessels and boosts amount of blood and this. Increase in blood thus causes increase in menstrual blood. and creates Rakta-pradara. Aggravated Vata affects uterine vessels and boosts amount of blood. Here Asrukadara comes under the Atipravruti of Samanya strotodushti lakshana.

6.Gudapaka-

vitiation of Vata and Pitta doshas, leading to impaired digestion (Mandagni) and the accumulation of Ama (undigested toxins). When digestion is weak, the Ama ferments in the colon, causing putrefaction and the production of gaseous toxins. This leads to symptoms such as foul-smelling stools, bloating, abdominal discomfort, and irregular bowel movements. The condition is a result of disturbed digestion and metabolic processes, primarily involving the lower gastrointestinal tract. Here Gudapaka comes under the Sanga of samanya strotodushti lakshana.

7. Medhrapaka-

Medhrapaka is caused by the aggravation of Vata and Pitta doshas, vitiated doshas lead to the formation of abnormal urine (Meha), characterized by a change in its colour, smell, and consistency. Here Medhrapaka comes under the Sanga of samanya strotodushti lakshana.

8. Pleeharoga-

When Vayu becomes aggravated and lifts the spleen, the spleen gradually increases in size, pressing the flanks.

Here pleeharoga comes under the Sanga & granthi of Samanya strotodusti lakshana.

9. Gulma-

When Vayu becomes aggravated and takes aashraya in the gulma Sthana (Hriday Nabhi, Basti & Both flanks), it generates a painful swelling, which is called gulma.

Here Gulma comes under the Sanga & granthi of Samanya strotodusti lakshana.

10. Vidradhi-

In female due to abnormal conditions, such as miscarriage or abortion in women, Even in normal delivery, women indulge in improper diet leads to collection of blood, which leads to inflammation, pain, and fever. Here Vidradhi comes under the Sanga and granthi of samanya stroto Dushti lakshana.

11. Nilika-

Due to excessive anger and hard work the Pitta and Vat increases and Painless small, black coloured circular patches occurs all over the body. Here nilika comes under the Sanga of samanya strotodushti lakshana.

12. Kamala-

If a person with Pandurog, consum food or follow lifestyle which aggregate Pitta then it leads to aggravation of Pitta, resulting in the onset of Kamala (jaundice). The aggravated Pitta, being tikshana and ushna, burns the Rakta and Mamsa, tissues, causing the disease. The origin of the disease lies in the Mahasrotas (main channels), with its manifestation in the Rakta and Mamsa tissues, and it spreads throughout the body. Here bahupitta Kamala comes under the Vimarga-gamana & Ruddha path kamala comes under the Sanga of Samanya strotodusti lakshana.

13. Vyanga

Due to excessive anger and hard work the Pitta and Vata increases and causes black hyper pigmented Painless small, grey coloured circular patches on face.here vyanga comes under the Sanga of samanya strotodushti lakshana.

14. Pipalava

When aggravated pitta reaches the blood and becomes dry, and causes pipalava. Here pipalava comes under the Sanga of Samanya strotodusti lakshana.

15. Tilakalaka-

When aggravated pitta reaches the blood and becomes dry resulting in appearance of black coloured spot resembling sesame seeds on the skin. Here Tilakalaka comes under the Sanga of samanya strotodushti lakshana.

16. Dadru-

Dadru is dominated by Pitta and Kapha doshas. It presents with red, raised eruptions on the skin. The lesions are circular or ring-shaped, with intense itching (Kandu) in the affected area. Sometimes, the edges of the ring are elevated, with red eruptions and itching, while the center resembles normal skin. In some cases, the center of the lesion may appear dark, cracked, and itchy.here Dadru comes under the Sanga of samanya stroto dushti lakshana.

17. Charmadala-

The imbalance of Pitta and Kapha doshas results in the formation of these explosive lesions, with intense burning and itching, and the rupture of these lesions causes further skin damage in the form of cracks. Here charmadala comes under the Sanga of samanya strotodushti lakshana.

18. shwitra

Shwitra is Rakta Pradusaja Vikara. Dietary and behavioural alteration evokes the Tridosa. In Shwitra, Rakta gets sitiated, but all signs and symptoms related to Rakta are not always manifested in shwitra. Due to excessive intake of nidanas three doshas such as Vayu, Pitta and Kapha are aggravated in association with Twaka, Rakta, Mamsa and Udaka. As a result varieties of Skin diseases are caused such as Shwitra.

Here shwitra comes under the Sanga of samanya strotodushti lakshana.

19. Pama-

The disease arises due to the imbalance of Pitta and Kapha doshas. This leads to the rapid formation of pustules, increased secretion, and inflammation, resulting in the characteristic symptoms of itching, burning, and discharge. The imbalance causes the rapid accumulation of toxins and fluids, which manifests as pustules and discharge. Here pama comes under the Sanga of samanya strotodushti lakshana.

20. kotha-

suppression of the chardi vega causes a disturbance of Pitta and Kapha in the abdomen. Pitta and Kapha then vitiate the Rakta (blood), leading to its impurity. This results in inflammation and the formation of pustules or red, raised eruptions on the skin. This condition is known as Kotha in Ayurveda. Here koth comes under the Granthi of samanya strotodushti lakshana.

21.Raktamandal-

imbalance or disorder of the blood (Rakta). Its pathogenesis primarily involves the aggravation of Pitta dosha, which governs the blood and its transformation. When Pitta is disturbed due to factors like heat, acidity, poor diet, or emotional stress, it leads to vitiation of the blood. This results in inflammation, redness, swelling, and toxicity in the blood.here raktamandal comes under the Sanga of samanya strotodushti lakshana.

Samanya strotodusti lakshana	Raktavaha strotsa dushti lakshana
Sanga	Kustha, Gudapaka, medhrapaka,Ruddha path kamala,nilika,vyanga,pipalava,tilakalka,dadru,charmadla,shwitra,pama,raktamandal
Sira & granthi	Visarpa,pidaka,pleeha,gulma,vidhradhi
Granthi	Koth
Vimarga gamana	In all vyadhi vimarga gamana occurs along with Atipravrutti,sang & granthi

Vimargagaman as a Component of Samprapti-

Whenever we observe the blood coming out the external orifices or notices fat & tissue, fluid while excreting through urine, We Canfirms the pathology of *Vimarga gamana* has been occured in body.

But even though the fluid / blood is not Coming outside the body the *vimargamana*. can be occuring inside the body

As concept of *vimarga gamana* is not only limited to excretion of *bhava padartha*, This concept is valid for all *bhava padartha* that are flowing through the *stroatasa* who have their *prakrut marga* (Normal route)

When they don't follow the normal route & goes in other place through the abnormal flow or got deviate in their normal movement then it is called *vimarga gamana* of *bhava padartha*.

Vimarga gamana is the pathology which is present in all lakshana of strotodusti that's why the word Vimarga gamana 'Ch' is used.

That means along with atipravrutti, Sanga, siragranthi there will be vimarga gamana.

In some *lakshana* we observe *Atipravrutti* pathology In some we observe *siragranthi* pathology but there is always *vimarga gamana* pathology occurring in every *strotodusti lakshana*.

Pathophysiology of Rakta pradoshaj vikara & it's Chikitsa

Raktavaha strotodusti, which is caused by the aggravation of Pitta, leads to the disruption of the natural formation of Rakta. This results in the vitiation of the dosha, leading to Raktadusti, and causes various Raktapradoahj vikara.

In ayurveda 'Nidanparivarjana' (avoidance of disease causing factor) & 'Sampraptibhanga' serving as a fundamental approach to treatment and prevention.

Chikitsa sutra

कुर्याच्छोणितरोगेषु रक्तपित्तहरीं क्रियाम् ।

विरेकम्पवासं च स्त्रावणं शोणितस्य च ॥(च सू 24/18)

In blood-related disorders, one should perform *rakta-pittnashak* actions, such as *virechan*, *upvaas*, or *rakta-mokshan*.

- 1. Virechana primarily pacifies pitta, which in turn facilitates the vata to follow its natural course.
- 2. *Upvaas* helps in pacifying *pitta* and *kapha*.
- 3. Rakta-mokshan helps in eliminating blood impurities.

Limitations of the Study

1. Literary Nature of Study

The present research is purely based on textual and conceptual analysis of Ayurvedic classical texts. No clinical or experimental validation has been carried out. Hence, applicability in real patients remains to be tested.

2. Dependence on Classical References

The analysis depends largely on the descriptions given in Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya. Interpretations may vary according to different commentators, leading to subjective bias.

3. Lack of Quantitative Data

Since the study is qualitative, there are no statistical or measurable parameters to support the categorisation of Raktavaha Srotodushti Lakshana under Samanya Srotodushti patterns.

4. Overlap of Lakshana

Many Raktavaha Srotodushti Lakshana overlap with more than one type of Samanya Srotodushti Lakshana (e.g., both Sanga and Granthi). Exact categorisation sometimes becomes interpretational rather than definitive.

5. Absence of Modern Correlation

Although attempts have been made to understand the pathogenesis, there is limited integration with contemporary medical knowledge (pathophysiology/haematology/vascular medicine).

6. Generalisation of Findings

The study generalises findings from classical texts to all clinical contexts, but individual variation (Prakriti, Srotas Bala, Dosha status) may change disease expression, which is not considered here.

7. Limited Scope of Diseases

Only Raktavaha Srotodushti Lakshana are discussed in depth. Other important Srotas and their dushti patterns are not part of the present study, limiting broader application.

Further Scope of the Study

- 1. Clinical Validation Categorisation of Raktavaha Srotodushti Lakshana under Samanya Srotodushti needs validation in clinical practice.
- 2. Diagnostic Frameworks Can be used to design clinical tools for early identification of Srotodushti patterns.
- 3. Experimental Research Models may be developed to study nidana-induced Raktadushti and its correlation with Atipravrutti, Sanga, Granthi, and Vimarga-gamana.
- 4. Modern Correlation Further studies can correlate Srotodushti with modern hematological and vascular pathophysiology.
- 5. Therapeutic Application Understanding of Samprapti can guide targeted chikitsa for Rakta Pradoshaja Vikara.
- 6. Extension to Other Srotas Similar analysis can be extended to Pranavaha, Annavaha, and other Srotas.
- 7. Terminology Standardisation Future work can focus on uniform definitions and interpretations across classical texts.

References

- 1.Charak Samhita Vidyotinitika, Shastri K, Chaturvedi G, 1st edition. Varanasi: Chaukhambha Bharati Academy; 2008. Vol.1, ch. Vimansthana 5/3
- 2.Charak Samhita Vidyotinitika, Shastri K, Chaturvedi G, 1st edition. Varanasi: Chaukhambha Bharati Academy; 2008. Vol.1, ch. Vimansthana 5/9 page no 710.
- 3. Astanga Hridaya Vidyotinitika, Kaviraja Gupta Atrideva, 1st edition. Varanasi: Chaukhambha Prakashan; 2016. Vol. I, Asthang hridaya sharir 3/40-41, Page no.254.
- 4.Shastri Kashi Nath, Vidyotini Commentary on Charka Samhita, Varanasi: Chaukhamba Bharti Academy, 2018. Ch. Viman sthana 5/23.
- 5.Sushruta Samhita Ayurveda Tattva Sandipika, Shastri Ambikadatta, 1st edition. Varanasi Chaukhambha Sanskrit Sansthan, 2014. Vol. 1, Su. Sha: 9/12 Page no.55.
- 6.Astanga Hridaya Vidyotinitika, Kaviraja Gupta Atrideva, 1st edition. Varanasi: Chaukhambha Prakashan; 2016. Vol. I, Asthang hridaya sharir 3/
- 7. Sharangdhar Samhita Jeevan Prada Hindi Tika, Chaukambha Orientalia Edition 2017 Purvkhnad 5/44 page n. 42.
- 8.Charak Samhita Vidyotinitika, Shastri K, Chaturvedi G, 1st edition. Varanasi: Chaukhambha Bharati Academy; 2008. Vol.1, ch. Vimansthana 5/24.
- 9.Charak Samhita Vidyotinitika, Shastri K, Chaturvedi G, 1st edition. Varanasi: Chaukhambha Bharati Academy; 2008. Vol.1, ch. Sutrasthana 28/11.