
A CRITICAL ANALYSIS ON NIDANA PANCHAKAS OF KATIGRAHA- A LUMBOSACRAL DISORDER

Dr. Priya. K. Pillai

Assistant Professor, Department of Panchkarma, Jayoti Vidyapeeth Women's University, Jaipur,
Rajasthan. Mail- drpriyakalluz@gmail.com

Dr. Swathi K.S.

Assistant Professor, Department of Rasa Shastra And Bhaishajya Kalpana, Jayoti Vidyapeeth
Women's University, Jaipur, Rajasthan.

Dr. Shyamveer Ghuraiya

Assistant Professor, Department of Roga Nidan Evam Vikriti Vigyan, Jayoti Vidyapeeth Women's
University, Jaipur, Rajasthan.

Dr. Mayukh Sharma

Assistant Professor, Department of Dravya Guna Vigyan, Jayoti Vidyapeeth Women's University,
Jaipur, Rajasthan.

Dr. Jyoti Yadav

Assistant Professor, Department of Kriya Shareera, Jayoti Vidyapeeth Women's University, Jaipur,
Rajasthan.

Dr. Deepak Sharma

Assistant Professor, Department of Maulik Siddhanta, Jayoti Vidyapeeth Women's University,
Jaipur, Rajasthan.

ABSTRACT

Health is wealth, this is one among the famous proverbs told by our ancestors long before and health of a human is deeply controlled by the lifestyle and environmental factors. Because of the busy life schedule, lifestyle disorders are more in the present era and so they need more attention. The strain which imparts physically as well as mentally as a result of occupation without any rest are the common reasons for katigraha manifestation. The paraspinal muscle spasm is one of the result of long strain work results in katigraha, which is co-related to lumbar spondylosis. It affects all age groups but the causes may vary among individuals. Improper lifestyle and postures are the two main causes, where katigraha got manifested among the generations. While see in terms with economic terms, katigraha is mostly one among the largest medical problem awaiting for a solution in the most positive way. Katigraha can be positively treated by various treatment procedures mentioned in ayurvedic classics. Vatadosha is the main culprit which is responsible for the pathogenesis of katigraha along with dushya, asthi which is also the asrayasthana for vata dosha. So, this sammoorchana of dosha and dushya makes

the pathogenesis more complex. Ayurvedic treatment line are more effective, but recurrence and treatment duration are the problems that we met with such lifestyle disorders.

KEYWORDS: Katigraha, Vata Dosha, Lumbar Spondylosis

INTRODUCTION

Ayurveda, Life science is the world's oldest health system which is a total approach to healthy living. In this new era, drastic progressive and fastest day today lifestyle has generated many problems among humans and Low back pain is one of the main culprit which blocks the day to day activities of mankind in the most unsuitable way. Studies revealed that 90 percent people around the world will be afflicted with severe Low backache and in some or other way, It has become an endemic disease of the age, due to the strainful life style which encourages stiff joints, flabby muscles, postural strain and obesity. Katigraha is a Vataja nanatmaja vyadhi told by Sharangadhara¹. Brihatrayees won't consider it as a separate entity, but it is told as a symptom for various disorders like Arshas, Ashmari and Bhagandara etc. In Bhavaprakasha Amavatadhikara² and Gadanigraha Vatavyadhi adhikara³ we can find a brief description on Katigraha as a separate disease along with its nidana, rupa and chikitsa. Here, it is considered as a condition characterized by pain and restricted movements of Kati caused by Shuddha or Sama vayu.

Panchakarma, one among unique branch of Ayurveda which deals with detoxification of the body. It is unique in various ways, as this therapy is based on elimination of doshas causing disease in body, which no other systems in the world has told. Basti karma, which is the fifth karma among panchakarma is the most apt treatment for vata dosha which is the main culprit for manifestation of katigraha. Moreover, the Udbhava stana of Katigraha is Pakvashaya and in general, whenever the Doshas are aggravated in Pakvasaya pradesha, they have to be eliminated through Gudha marga which is possible by Virechana and Basti⁴.

NIDANA

The explanation of Nidana for all the disorders is not same in Ayurvedic classics. In certain disorders, we can see explanation of Samanya as well as Vishesha Nidana, but it is restricted to Samanya Nidana with regard to various other disorders.

Though the etiologies of all the Vatavyadhis are similar, the Samprapti & clinical presentation is unique for each Vatavyadhi, distinguishing them from one another.⁵

Charaka⁶ & Bhavaprakasha⁷ clearly mentions the causative factors of Vatavyadhi; but in Sushruta Samhita, Ashtanga Sangraha & Ashtanga Hrudaya etc. the causes of Vatavyadhi have not been clearly described. However, in these texts the causative factors of provoked Vatadosha are available.⁸

In Gadanigraha of Shodala were mentioned clearly about Katigraha as a disease along with other Vataja disorders.

Even though Katigraha is not mentioned as a separate entity in Brihatrayees, from a reference by Chakrapani while commenting on Charaka Nidana 8/40, it may be diagnosed as a separate disease. He says that '*any symptom can be manifested as a separate entity also*. By analyzing the Adhishtana and lakshana of Katigraha, it is clear that the condition is vitiated by Vatadosha. So the Nidana factors for

Vatavyadhi in general can be considered as the Nidana of Katigraha. Moreover, Asthi being the Dhatu involved in the pathogenesis, Nidana for Asthivaha and Purishavaha Srotodushti may act as Nidanans for Katigraha.

In addition to these Charaka and Vagbhata has mentioned Dhatukshaya and Margavarodha to be the root cause of all the Vatavyadhis.^{9,10,11} Vata dosha can also be vitiated very badly due to Panchakarma apacharas like Ati-doshasravana, Ati-rakthasravana, Atiyoga of Langhana, Apatarpana etc and Dhatukshayakara bhavas like Rogakarshana, Gadakrita Ati-mamsakshaya. Both Dhatu Kshaya and Stholya are considered as causative factor for Vatavyadhi. In Sthoulya, the Meda-avarana is the mechanism, which in turn leads to improper nourishment of Dhatus causing Kshaya in Dhatus except Meda.¹²

SAMPRAPTI

The study of Samprapti is the most unavoided factor of understanding a disease. It explains the total disease process which manifests after having Nidana. It includes the details about the vitiation of Doshas and the pathological changes that takes place in a person which leads to the formation of the diseases and also about the mode of manifestation of clinical features¹³. The knowledge of Samprapti is very much essential when see for its Chikitsa as it has told by our Acharyas that- "Samprapti vighatanameva Chikitsa", which means systemic breaking of Samprapti is called Chikitsa hence a proper analysis of Samprapti along with its factors is very much essential.

Gadanigrahakara considered Katigraha to be one among the Vatavyadhis. It clearly defines Vata dosha as the major culprit behind the whole pathogenesis involved in Katigraha. He explains that the vitiated Shudha or Saama vayu takes its Ashraya in the Katipradesha leads to pain and stiffness. In the dominance of Vata dosha, Shula is the main symptom. It is already mentioned that all the Nidanans of Vatavyadhi & Vata prakopa can be considered as Nidana of Katigraha.

Specific Samprapti of Katigraha is not described in the classics but being a Vata vyadhi its Samprapti vyapara is on the similar lines of Vatavyadhis. The two types of Sampraptis are there ie; Dhatukshaya and Margavarodha.

Dhatukshaya as a reason for Katigraha

Continuous intake of food items which are Rooksha, Sheetha, Laghu and Sushka in nature, Ratri jagarana, Vegadharana, Pramitasana, and all such causes lead to Dhatukshaya¹⁴ and Vataprakopa. And in terms due to predominance of Vata with its Rooksha, Khara, etc. Guna leads to loss of Kapha in quality and quantity. This will lead to Kapha degeneration of body elements takes place by which Dhatus formed will not be of good quality. It occurs specially in Asthi, Majja, Meda and Mamsa Dhatukshaya.

Reduced Kapha in Sandhis makes Sandhi Bandhana Shithilatha. Ashrayashrayi Sambandha also leads Asthidhatu Kshaya. Asthi being the main participant of the joint its Kshaya leads Kha-vaigunya in the joints.

In this condition if Nidana Sevana done further produces Vata Prakopa. If Vata Prakopa is not controlled by appropriate measures and along with if the person indulges in Asthivaha and Majjavaha Sroto Dushtikara Nidana, the Vata which is prakupitha will spreads all over the body through these Srotas. In the meantime, Sthanasamshraya of Prakupita Vata takes place in the Kha-vaigunyakta

Sandhi in Katipradesha. This localized Vayu due to its Ruksha, Laghu, and Kharadi Guna over power, undo all properties of Sleshaka Kapha producing stiffness and pain in the katipradesha ultimately resulting in the disease Katigraha.

Margavarodha as a reason for Katigraha

The disease Katigraha can be manifested due to Kevala Vata or by Saama Vata. The Saaama Vata indicates the Margavarodhajanya type of Vikruthi. The Nidanas like Adhyaashana, Vishamasana and other Ama Kara Nidanas first vitiates Agni leading to Manda Agni. Derrangement of Jatharagni and Dhatwagni giving rise to Ama of both origins cause Srotaavarodha in the Adhishtana. Due to such Srotavarodha in the Gati of Vata produces Lakshanas like, 'Ruk', Stambha etc.

Most of the times when Kha-vaigunya is present at Kati, Sphik, Sandhi, Snayu, Kandara and Nadi and some kind of trauma, exposure to cold etc. will act as a Vyanjaka hetu. Sometimes without any previous Kha-vaigunya severe trauma or injury to lumbosacral region leads to sudden contraction of Mamsapeshi of Katisandhi which inturn leads to Sransa or Bhramsa of Kasherukasthi of Katisandhi (Prolapse intervertebraldisc) and Vataprakopa. This can be said as Agantuja Nidanajanya Katigraha.

POORVAROOPA

These Poorvaroopa usually are exhibited during the stage of 'Sthana Samshraya' of the 'Shadkriyakala'¹⁵. At that time when Dosha-Dushya-Sammurchana takes place, some specific signs and symptoms are observed in particular disease which may be clear or not, they are termed as Poorvaroopa. It is important to diagnose and treat the disease at this stage so that patient may be saved from the functional or organic damage as well as degree of morbidity. This may be created during complete manifestation of the disease.

In Ayurveda classics, the description of the Poorvaroopa of Katigraha is not available. Even then, few of the general citations in the classics pertaining to the occurrence of the Poorvaroopa in Vatavyadhi are worth mentioning.

Charaka has mentioned that Avyakta Lakshana is the Poorvaroopa of the Vatavyadhi. Chakrapanidatta commenting on the word Avyakta mentions that few mild symptoms are to be taken as the Poorvaroopa¹⁶. But Vijayarakshita, the commentator of Madhava Nidana has given the clear meaning of the term Avyakta, according to which symptoms not exhibited clearly are Poorvaroopa and they are due to Weak causative factors, Very less or mild symptoms, Less Avarana of Doshas. It is obvious from the above reference that Avyakta is Alpa Vyakta or less manifested. So, in Katigraha also Poorvaroopa can be taken as minor symptoms produced before the actual manifestation of the disease. Vague pain, mild discomfort in the low back and limitation in the spinal movements in its minimal severity may be considered as Poorvaroopa of Katigraha. The development of these symptoms following excessive exercise straining the back, or else direct trauma to the back are always corroboratory of Katigraha.

Rupa :-

Rupa appears in the Vyaktaavastha i.e., fifth Kriyakala of the disease. Here, in this stage, the Dosha-Dushya Sammoorchana is completed along with the manifestation of all the Vyadhi lakshanas

including the Pratyatma linga, which are essential for the disease diagnosis. Katigraha is a Vatavyadhi which is characterized by pain and stiffness at the Katipradesha. These symptoms manifest in a clear and distinguishable form from its vague and mild form in Purvaroopavastha. The term Katigraha itself is self-explanatory pointing out the characteristic feature of Graham or stiffness. The condition is such that almost all the movements at the Katipradesha or the lower back region are hampered preventing the person from performing his day-to-day activities.

Acharya Charaka has hinted regarding various Vatavyadhis, which can occur according to the Hetu and Sthana vishesha, other than those he has explained in detail. Based on this excerpt various disorders can be considered due to vitiated Vata taking Ashraya in Katipradesha, including Katigraha. This progression occurs due to various Nidanas mentioned earlier including direct injury to the Katipradesha.

Ruja :

Acharya Shodala while explaining Katigraha has mentioned pain as one of the prime symptom. Ruja is the term used by him to describe the character of pain in this disease.

‘Ruja Vedana.’¹⁷

‘Ruk Satatam Shulam.’ ‘Ruk Shulam.’¹⁸

In a typical case, pain is confined to the Katipradesha or the Lumbo sacral and sacroiliac region only. Pain can arise due to the vitiated Vyaana Vata, which dries up the Sleshaka Kapha in the joints creating friction. If the vitiation is due to any Abhighata, pain can manifest because of injury to the Sandhi as well as the surrounding structures. Radiation of pain towards the lower limb is not seen in a typical case, but can be found in few low back disorders where there is a defect in the Inter vertebral discs, which is giving tension to a nerve root passing out.

Graham :

The main characteristic feature of Katigraha is stiffness/graha at the Katipradesha. The vitiated Vata when it takes Ashraya in Katipradesha, it leads to the Shoshana of the Sleshaka Kapha present in the Sandhis there. The Shoshana of Sleshaka Kapha leads to the hampered functioning of the joints preventing all the movements at the Katipradesha. Thus, the movements are hampered either completely or partially at the Lumbo-sacral region like flexion, extension, lateral flexion and rotation. The degree of affection varies depending on the presentation of etiological factors, such as the site of the structures injured and the extent of injury and duration.

VYAVACHEDAKA NIDANA OF KATIGRAHA:

Diagnosis is successfully done by thorough observation of the patient by exploring the clinical manifestations and analyzing the symptoms to determine the Doshic vitiation, involvement of Dhatu, affliction of Srotas, as well as other modes of Samprapti. Vyavachedhaka Nidana or comparison of diseases presenting similar clinical features helps us for proper diagnosis.

Acharya charaka has described that one symptom may be common to many diseases, one symptom may be related to only one disease, many symptom may be related to only one disease, and many symptoms may be common to many diseases.

So for better understanding of the disease we have to look it through different angles. Here comes the Chathurvedha pareeksha, ie knowing the disease as a separate disease, as a symptom of other disease, as a Poorvaroop, and as an Upadrava.

KATIGRAHA AS A SEPARATE DISEASE:-

Gadanigraha and Bhavaprakasha described Katigraha as a separate disease, which is the stratum of the present study.

KATIGRAHA AS ASSOCIATED SYMPTOM:-

Stambha, Ruk & Thoda of Kati is mentioned in Gridhrasi Samanya lakshana.¹⁹

In Vataja gridhrasi Sphurana and Stabhata of Kati is mentioned.²⁰ Katigraha is mentioned in Vatajvara.²¹ Amavata.²² Katigraha is mentioned Vankshanotha & Vrikkaja vidradhi.²³ Stambha of Kati is told in Pureeshaja anaha.²⁴ Katigraha is mentioned in Kshataja kasa.²⁵ Ruk & Sadana of kati is mentioned in Pandu samanya lakshana.²⁶ Sangraha Grahani.²⁷ Katishoola is mentioned in Vataja pakvatisara.²⁸ Vedana in Kati pradesha is mentioned in Asanjatha jalodara.²⁹ In Vathodara, Ruja of Kati, Prushta is mentioned.³⁰ In Vatholbanarshas & Vathanubandha raktharshas, Vedana in Kati pradesha is told.³¹ Vedana in Kati pradesha is told as an Upasthitha prasava lakshana and it is seen in gynec disorders such as Vatika Asrugdara, Upavishtaka Nagodara, and Prakcharana.³² Svapna of Kati is mentioned in Medakshaya.³³ Kati, Uru Vamkshana bhanjana is mentioned in Bahyayama.³⁴ Kati bhanga is seen in seventh Vega of Sthavara visha.³⁵ In Sahajarsha, Thrutheeyaka jvara³⁶ and Madatyaya³⁷, Trikagraha is mentioned as a symptom.

Katigraha as a purvarupa:-

Katigraha is seen as a Poorvaroop for Ksheena roga along with Raktamootratha.³⁸ Nistoda, Sphurana, Bheda, Supti and Guruta of Kati, Janu, Jangha, Uru, Amsa are mentioned in Vatarakta.³⁹

Kati- kapala vedana is told in Bhagandara Poorvaroop.⁴⁰ Basti, Kati, Mushka, Medra Vedana is mentioned as Poorvaroop for Vrudhi.⁴¹

Katigraha as upadrava-

Stambha, Arthi and Bhedana of Kati, Guda, Jangha, Uru and Basthi are mentioned in Athidrutha basti datha doshas.⁴² In Sneha basti vyapat, Kati shoola is explained.⁴³ Langhana Atiyoga may lead to Vedana in Kati pradesha.⁴⁴ Parshva prushta katigraha may manifest due to Athimatraahara.⁴⁵ Overusage of Katurasa may lead to Vyadha of Kati and Prushta region.⁴⁶

Katigraha as a part of samprapti-

In Pakvashaya Vata kopa, Katigraha is mentioned along with Shoola, Anaha, Antrakoojana, etc.⁴⁷ Jangha, Ooru, Trika, Prushta rogas may manifest when the Vata prakopa occurs in the Gudapradesha.⁴⁸ Trika sandhi pravesha is explained in the disease Amavata.⁴⁹ Apart from this the Katigraha disease itself is of two types' Shudha Vataja & Sama/VataKaphaja. So while diagnosing Katigraha, conditions like Dhatukshaya and Avarana should be differentiated apart and this will help in successful treatment.

SADHYATA – ASADHYATA

The Sadhyata-asadhyata or prognosis of a disease depends on many factors such as the Bala of Nidana or Hetu, the strength of Dosha Prakopa, the Sthana of the disease, severity of signs and symptoms, duration of the disease etc. It also depends upon the age, sex, Rogamarga, Dhatudushti etc. These

common rules are applicable in the case of Katigraha. In addition, Katigraha is a Vatavyadhi and the Svabhava or natural trend of Vayu is also an important factor. Acharya Sushruta has explained Vatavyadhi as Mahavyadhi which is cured with difficulty. According to Acharya Charaka, if Vatavyadhi is connected with Sandhichuti, Kunjanam, Kubjata, Ardita, Pakshaghata, Amsashosha, Panguta and those which are Majja and Asthigata are usually cured with very difficulty or even not curable. Katigraha is a Vatavyadhi if it is associated with Kapha the curing chance are more than in Kevala Vataja variety. Still however if the patient comes earlier for the treatment and if given prompt proper treatment in sufficient dose and duration, then the patient is likely to be cured or less likely to suffer from a subsequent attack of pain. In case the changes in the spinal joints are in advanced nature of the disease then with even the best treatment it is not likely to be cured.

UPASHAYA AND ANUPASHAYA:-

Upashaya are the medicines, diets and regimens, which bring about happiness either by acting directly against the cause of the disease, or it may produce such effect on the disease indirectly.

CHIKITSA

Katigraha one of the Vatavyadhi is produced by the vitiated Vata stemming out from the Pakvashaya, localizing in the Kati pradesha, may afflict the Asthi Dhatu, and vitiates the Snayu and Kandara of the Kati pradesha. The resultant condition is characterized by pain and stiffness of the Kati pradesha. It is difficult to unify an effective treatment for this, as the disease may or may not be associated with Ama. Therefore, the procedures aiming at the rectification of the imbalances in Vata Dosha as well as Kapha Dosha forms the sheet anchor of treatment of Katigraha.

The general principles of treatment of Vata Dosha should be adopted in cases of Katigraha after the assessment of Dushya, Prakruti, Vaya, Linga, Bala, Satva, Satmya. The treatment of Katigraha includes various measures to suit its varied clinical entities, stages and associated complaints. The treatment also constitutes the Aahara, Vihara, Shodhana, Shamana and surgical measures. The specific Nidanans of the diseases must be identified and efforts must be made for its Parivarjana. The etiological factors mentioned previously pertaining to Aahara; Vihara etc are to be avoided with special reference to the identification of the actual cause of the patient's present condition. After reviewing the classics, it is ideal to manage Katigraha with snehana, bahya snehana like parisheka, dhara, abhyanga, avagaaha, katibasti, etc. swedana like avagaha, nadi sweda, patrapinda sweda, etc, mridu virechana, basti, as it is an ardha chikitsa for vata and shaman chikitsa can also be adopted with this.

DISCUSSION AND CONCLUSION:

Kati is an area where there is a conglomeration of various Sandhis, Snaayu, and Peshis. Sandhi is a place where two or more structure unites and in the context of Asthi Sandhi, a junction between two bones can be considered. Sandhi is not a single structure rather it is considered as an organ. There are different structures, which helps in maintaining the stability of the joint. Snayu or ligament, are those structures which helps in proper binding of the joint. They unite the bones and help to direct the bone movement and prevent the excessive and undesirable motion. Muscle tone helps to maintain the alignment of the joint. Shleshmadharakala situated in the joints supported by Shleshaka Kapha helps in lubrication,

provides nutrients and helps in keeping the joint firmly united. Therefore the vitiation of Vata can cause pathologies of these structures in the Kati pradesha leading to their hampered functioning. Katigraha is characterized by pain and restricted movements of the Kati Pradesha. The pathology of Katigraha can be explained in two ways, Dhatukshaya and Avarana. In Dhatukshya Janya Katigraha due to old age and Vatakara Ahara Vihara there will be qualitative change in the joint material gradually leading to disease manifestation. The other way of Samprapti where in due to continuous pressure due to various factors like accumulated Mala the joint may get affected (due to Avarana) leading to disease manifestation. But here the characteristic symptom of stiffness may or may not be seen but the referred pain can be obtained. This demarcation in Samprapti helps in planning the treatment.

REFERENCES:

- Pandit Parashurama Shastri Vidyasagar edited Sharangadhara Samhita, Deepika Commentary by Adamalla on Prathama Khand, Chapter 7, Sloka No.105, Page No.103, 3rd edition 1983, Pub: Chawkambha Orientalia, Varanasi.
- Prof. Hariharaprasead Pandeya edited Bhavaprakasha with Vidyothini Hindi commentary of Brahmasankara Misra, 2nd volume, chapter 26, sloka no 53, page no 286, edition 6th (1997) Pub: Chaukamba Sanskrit samstan, Varanasi.
- Vaidya Shodala edited Gada Nigraha, Hindi translation by Gana sahay pandey, 2nd volume, chapter 19, sloka no 160, page no 505, Edition: reprint 2005, Pub: Choukambha Surabharathy Prakasana, Varanasi.
- Prof. K R Srikantha Murthy edited Susruta Samhita english translation, 2nd volume, chikitsa sthana, chapter 4, sloka no 5-6, Page no 56 reprint edition 2008, Pub: Chaukamba Orientalia Varanasi.
- Vagbhata, Ashtangasangraha Shareerasthana chapter 7 sloka 7. Varanasi: Krishnadas Academy; 1982.64 (Krishnadas Academic series 4).
- Vaidya Jadavji Trikamji Acharya edited Susrutha Samhitha, Sanskrit translation, Shareera stana, Chapter 5, Sloka No., Page No.303, Reprint 2008, Pub: Choukhamba Surbharati Prakashan, Varanasi.
- Vaidya Yadavji Trikamji Acharya edited Charaka Samhitha, Sanskrit translation, Shareera stana, Chapter 8, sloka no 51, Page No.89, Reprint 2011, Pub: Choukhamba Surbharati Prakashan, Varanasi.
- Vagbhata, Ashtangahridaya nidanasthana chapter 1 sloka 10. Varanasi: Krishnadas Academy; 1982. p.443 (Krishnadas Academic series 4).
- Agnivesa, Charakasamhitha Chikitsasthana chapter 28 sloka 15-17. 4th ed.
- Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p. 617 (Kasi Sanskrit228)
- Acharya Bhavamishra; Bhavaprakash Nighantu, commentary by Dr.K.C Chunekar, chapter 24 sloka 1-2 edited by Dr.G.S.Pondey, 1998, Chaukambha Bharati Academy, Varanasi.

- Vagbhata, Ashtangasangraha Nidanasthana chapter 15 sloka 31,34,41. Varanasi: Krishnadas Academy; 1982.64 (Krishnadas Academic series 4).
- Prof. Yadunadana Upadhyaya edited Madava Nidana, Part I, Chapter 22, Shloka No. 1- 4, Edition: Thirtyth 2000, Pub: Chaukhamba Sanskrit Bhavan, Post Box No. 1160, Varanasi, Page No. 232.
- Yogaratnakara: Vidyotini Hindi commentary by Vaidya Laksmipathi Sastri, 7th edtn 1999, Chaukhamba Sanskrit Sansthan, Varanasi.pg 400.
- Acharya Bhavamishra, Bhavaprakash; Vidyotini Hindi Commentry by Brahmasankara misra & Rupalalji Vaisya, Chaukhamba Sanskrit Sansthan, Varanasi pg 450.
- Vagbhata, Ashtangasangraha Sutrasthana chapter 19 sloka 6. Varanasi: Krishnadas Academy; 1982. P 149 (Krishnadas Academic series 4).
- Prof. Yadunadana Upadhyaya edited Madava Nidana, Part I, Chapter 1, Sloka No.10, Edition: Thirtyth 2000, Pub: Chaukhamba Sanskrit Bhavan, Post Box No. 1160, Varanasi, Page No. 39
- Agnivesa, Charakasamhitha sutrasthana chapter 17 sloka 76-77. 4th ed. Varanasi: Chaukhamba Sanskrit Sansthan; 1994. P103. (Kasi Sanskrit series 228).
- Sushruta, Sushruthasamhitha sutrasthana chapter 21 , Varanasi: Krishnadas Academy; 1980. p. 103. (Krishnadas Ayurveda series 51).
- Agnivesa, Charakasamhitha chikitsasthana chapter 11 sloka 12. 4th ed. Varanasi: Chaukhamba Sanskrit Sansthan; 1994. p.478 (Kasi Sanskrit series 228).
- Agnivesa, Charakasamhitha chikitsasthana chapter 28 sloka 3, 4th ed. Varanasi: Chaukhamba Sanskrit Sansthan; 1994. P 616. (Kasi Sanskrit series 228).
- Vagbhata, Ashtangahridaya sutraasthana chapter 12 sloka 49. Varanasi: Krishnadas Academy; 1982. p.530-531 (Krishnadas Academic series 4).
- Agnivesa, Charakasamhitha chikitsasthana chapter 28 sloka 56. 4th ed. Varanasi: Chaukhamba Sanskrit Sansthan; 1994. P 618. (Kasi Sanskrit series 228).
- Prof. Yadunadana Upadhyaya edited Madava Nidana, Part I, Chapter 22, Shloka No.56, Edition: Thirtyth 2000, Pub: Chaukhamba Sanskrit Bhavan, Post Box No. 1160, Varanasi, Page No. 39.
- Vaidya Yadavji Trikamji Acharya edited Charaka Samhitha, Sanskrit translation, Nidana stana, Chapter 1, sloka no 21, Page No.200, Reprint 2011, Pub: Choukhamba Surbharati Prakashan, Varanasi.
- Bhava Mishra edited Bhava prakasha with Vidyotini English translation by Dr.Srikantha moorthy, Chapter 26,Sloka No.53. Madyama khanda, Page no.372, Tenth Edition: 2002, Second part, Pub: Chaukhamba Sanskrit Sansthan.
- Prof. Yadunadana Upadhyaya edited Madava Nidana, Part II, Chapter 40, Shloka No15, Edition: Thirtyth 2000, Pub: Chaukhamba Sanskrit Bhavan, Post Box No. 1160, Varanasi, Page No. 39

- Prof. Yadunadana Upadhyaya edited Madava Nidana, Part II, Chapter 27, Shloka No29, Edition: Thirtyth 2000, Pub: Chaukhamba Sanskrit Bhavan, Post Box No. 1160, Varanasi, Page No. 24
- Vagbhata, Ashtangahridaya nidanasthana chapter 3 sloka 19. Varanasi: Krishnadas Academy; 1982. p.530-531 (Krishnadas Academic series 4).
- Agnivesa, Charakasamhitha chikitsasthana chapter 16 sloka 16. 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p. (Kasi Sanskrit series 228).
- Prof. Yadunadana Upadhyaya edited Madava Nidana, Chapter 4, Shloka No. 1, Edition: Thirtyth 2000, Pub: Chaukhamba Sanskrit Bhavan, Post Box No. 1160, Varanasi, Page No.12
- Agnivesa, Charakasamhitha chikitsasthana chapter 19 sloka 5. 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p.658 (Kasi Sanskrit series 228).
- Vagbhata, Ashtangasangraha Nidanasthana chapter 12 sloka 7. Varanasi: Krishnadas Academy; 1982. p.678 (Krishnadas Academic series 4).
- Vagbhata, Ashtangasangraha Nidanasthana chapter 12 sloka 7. Varanasi: Krishnadas Academy; 1982. p.678 (Krishnadas Academic series 4).
- Agnivesa, Charakasamhitha chikitsasthana chapter 14 sloka 11. 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p.508 (Kasi Sanskrit series 228).
- Vagbhata, Ashtangasangraha Shareerasthana chapter 4 sloka 14. Varanasi: Krishnadas Academy; 1982. p.293 (Krishnadas Academic series 4).
- Vagbhata, Ashtangasangraha Sutrasthana chapter 19 sloka 9. Varanasi: Krishnadas Academy; 1982. P 149 (Krishnadas Academic series 4).
- Sushruta, Sushruthasamhitha Nidanasthana chapter 1 sloka 57, Varanasi: Krishnadas Academy; 1980. p. 237. (Krishnadas Ayurveda series 51).
- Sushruta, Sushruthasamhitha Kalpasthana chapter 2 sloka 39. Varanasi: Krishnadas Academy; 1980. p.296. (Krishnadas Ayurveda series 51).
- Agnivesa, Charakasamhitha chikitsasthana chapter 3 sloka 71. 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p.408 (Kasi Sanskrit series 228).
- Vagbhata, Ashtangasangraha Nidanasthana chapter 6 sloka 15. Varanasi: Krishnadas Academy; 1982. p.458 (Krishnadas Academic series 4).
- Prof. Yadunadana Upadhyaya edited Madava Nidana, Part I, Chapter 10, Shloka No. 30, Edition: Thirtyth 2000, Pub: Chaukhamba Sanskrit Bhavan, Post Box No. 1160, Varanasi, Page No. 68
- Agnivesa, Charakasamhitha chikitsasthana chapter 29 sloka 16. 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. P 646. (Kasi Sanskrit series 228).
- Sushruta, Sushruthasamhitha Nidanasthana chapter 4 sloka 4. Varanasi: Krishnadas Academy; 1980. p. 25. (Krishnadas Ayurveda series 51).
- Sushruta, Sushruthasamhitha Nidanasthana chapter 12 sloka 5. Varanasi: Krishnadas Academy; 1980. p.539. (Krishnadas Ayurveda series 51).

-
- Vagbhata, Ashtangahridaya kalpasthana chapter 5 sloka 47. Varanasi: Krishnadas Academy; 1982. p.449 (Krishnadas Academic series 4).
 - Sushrutha, Sushruthasamhitha chikitsasthana chapter 36 sloka 34. Varanasi: Krishnadas Academy; 1980. p. 365 (Krishnadas Ayurveda series 51).
 - Vagbhata, Ashtangahridaya sutraasthana chapter 14 sloka 29. Varanasi: Krishnadas Academy; 1982. p.540 (Krishnadas Academic series 4).
 - Agnivesa, Charakasamhitha vimanasthana chapter 2 sloka 7. 4th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p. 304 (Kasi Sanskrit series 228).
 - Vagbhata, Ashtangahridaya sutraasthana chapter 10 sloka 19. Varanasi: Krishnadas Academy; 1982. p.520 (Krishnadas Academic series 4).