

## OCULAR MANIFESTATIONS IN SYSTEMIC DISEASES - AN AYURVEDIC PERSPECTIVE

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### ABSTRACT

Eyes are most important organ among the five Dnyanendriya. So its function can be considered as function of Dnyanendriya. The eyes are frequently involved in diseases affecting the rest of the body. Ocular manifestation in certain multisystem disorders may offer a diagnostic clue, sometimes the eye involvement may be subtle enough to avoid detection unless the clinician knows to look for it. So the ocular manifestation in the systemic disease is important to know through Ayurvedic perspective. Ophthalmic association in systemic diseases seen as Samprapti is Amashaysamudbhav and Siranusari. Various diseases and their ocular manifestation are discussed in this manuscript.

**KEYWORDS:** Ocular manifestations, Systemic diseases, Samprapti.

### INTRODUCTION

Eyes are most important organ among the five Dnyanendriya.<sup>[1]</sup> So its function can be considered as function of Dnyanendriya. The eyes are frequently involved in diseases affecting the rest of the body. Ocular manifestation in certain multisystem disorders may offer a diagnostic clue, sometimes the eye involvement may be subtle enough to avoid detection unless the clinician knows to look for it. So the ocular manifestation in the systemic disease is important to know through Ayurvedic perspective. Human body is made up of Tridosha<sup>[2]</sup> and Panchamahabhuta.<sup>[3]</sup> Netraroga Samprapti described by Acharya is Siranusari i.e. Dosha climbs the Urdhwajatru through Sira.<sup>[4]</sup> So ophthalmic association in systemic diseases seen as Samprapti is Amashaysamudbhav and Siranusari. Various diseases and their

ocular manifestation are discussed in this manuscript. Vitiating of Pitta is the leading etiological factor in the development of eye diseases.<sup>[5]</sup> Netra is Pitta predominant organ and Kapha Dosha can cause serious damage to Netra as an Agantuj Dosha.<sup>[6]</sup> It is seen that approximately 70-75% of systemic diseases have their own ocular manifestations. Because eyes are highly sensitive structure which can be affected easily due to Sharir Dosha Dushti in various systemic diseases. Acharya also described the systemic examination of a patient through Dashavidha Pariksha which also includes Netrapariksha.<sup>[7]</sup> While treating Netravadya along with Sthanik Chikitsa (Local treatment) systemic examination and treatment is also necessary and vice versa. The physician or an ophthalmologist must have to check thoroughly to a patient of Netraroga to find out its association with systemic diseases. This study emphasizes on utmost importance of eye as a diagnostic tool.

## OBJECTIVES

- i. To study the ocular manifestation (Lakshana) in systemic diseases.
- ii. To understand the Dosha-Dushya Pradhanya in eyes affected by systemic diseases.
- iii. To study the Hetu and Samprapti of the eye diseases.

## Netra Rachana Sharir (Anatomy of eye as per Ayurveda)

Each and every part of eyeball has its own predominant Mahabhoota and Dosha.<sup>[8]</sup> So a disease of one part is restricted to that part only. Gross anatomy of eyeball can be described as five Mandalas. They are extremely visible modules with unique characteristic features. They are self contained and anatomically self limited areas.

**Table no.1.**

Mandala	Dosha Predominance	Mahabhoota	Specific feature related with systemic factor
Pakshma Mandala	Vata	Vayu	Updhatu of Asthi
Vartma Mandala	Vyana- Movement Prana- Indriya Function Pitta- Nutrition, Lustre Kapha- Structural Stability	Agni and Prithvi	Vyana Vayu is situated in Hriday so general diseases where Vyana is involved the functions of Vartma will also be impaired. Diseases confined to head region where Prana is involved manifest signs and symptoms on Vartma
Shukla Mandala	Kapha Aubandhi Pitta	Aap	Contains blood vessels so diseases of Rasa-Rakta Dhatu confined to Shuklamandala
Krishnamandala	Vata	Vayu	Nutrition is from Rasa Dhatu

			so diseases of Rasa-Rakta Dhatu confined to Krishnamandala
Drishtimandala	Vata, Pitta, Kapha	All 5 Mahabhutas <sup>[9]</sup>	Since it is made up of all Dosha and Mahabhuta, when equilibrium of Dosha disturbs it create Drishtigata diseases

Table no.2.

Parts of eye	Mahabhuta	Dosha Predominance
Muscular part	Prithvi	Kapha
Vascular part	Agni	Pitta
Black part	Vayu	Vata
White part	Jala	Kapha
Lacrimal Passage	Akash	Vata

### Relation of Dhatu as a Systemic factor in eye diseases

Doshas and Dhatus have equal importance in formation of diseases as diseases manifest when Dosha are confined to Dhatu. Both Dosha and Dhatu have two aspects as Sthoola Roopa or Objective aspect and Sookshma Roopa or subjective aspect. Eye being a sense organ subjective aspect is more important. So Dhatu cannot be identified in the subjective level from its characteristic properties and functions. When the vitiated Doshas are confined to a particular Dhatu, a specific group or signs and symptoms are manifested and we can identify the involved Dhatu from signs and symptoms. Involvement of Dhatus in long standing diseases is, one after another. So they can be considered as layers. First layer is confined to the initial Dhatu Rasa and Rakta, second layer to Mamsa, the third layer to Meda and fourth layer to Asthi. So the Patalas are confined with Dhatu and Dhatu Dushti manifest sign and symptoms on eyes.

### Netra Roga Nidan (Etiological factors of eye diseases)

The equilibrium of the body is maintained by Vata, Pitta and Kapha Dosha. The etiological factors for vitiation of Doshas are different in different organs as the functions of Doshas are different from organ to organ. There is a specific group of etiological factors which are responsible for vitiation of Dosha and leading to eye diseases. These are

1. Aharaj
2. Viharaj
3. Mansik Hetu
4. Sarvadehik Hetu
5. Other ocular diseases.

The basis of all functions of body is 'Ahara' which is the most important etiological factor.<sup>[10]</sup>

The Dosha and Dhatus are created and maintained by Ahara.

- 1. Amla Ahara:** Among the six Rasas, Amla is more prone to eye diseases. So excessive intake of Amla Rasa is an etiological factor of eye diseases.
- 2. Vidahi Ahara:** Vidahi food items are not absorbed and assimilated easily hence not digested. Baked, over cooked and fried items come under this category.
- 3. Virudhahara:** Intake of those food items having opposite Rasa, Guna and Veerya derange the normal digestion<sup>[11]</sup> and bring out Utklesha of Dosha which in turn leads to 'Abhishyanda'.
- 4. Adhyashana Ahara:** Over eating leads to indigestion and ultimately vitiates Agni. This vitiated Agni deranges the properties of Rakta Dhatu which is an important causative factor for eye diseases.
- 5. Ushna Ahara:** Ushna Veerya Dravya vitiates Pitta, specially the Teekshna, Ushna and Laghu properties Pitta being the functional factor of the eye, any vitiation of Pitta, always leads to eye diseases.
- 6. Utklesha Ahara:** The dietary items comes under this category of Utklesha Ahara. These deranges the vasculature and permeability of the vessels of eye. which leads to Sirabhishyanda and in turns leads to eye diseases. Most of the dietary factors are having properties to derange Pitta Dosha functions and those which are Achakshushya as well as the main causative factors for eye diseases along with systemic diseases.<sup>[12]</sup> It is seen that 70-80% of systemic diseases have their own ocular manifestations. Because eye is highly sensitive structure. An ocular disease develops along with a systemic disease when the two diseases are having common Nidana.

### **Samprapti of Netraroga (Prognosis of the eye diseases)**

Samprapti can be explained as the pathological changes evoked by the etiological factors, which manifest the signs and symptoms of diseases. Samprapti is the action of Doshas. In the Dhatus via Srotas, which in turn manifest signs and symptom.

In Nija Samprapti the pathological changes not start in the eye but from other parts of the body. If Nidana is a Systemic disease, the system involved in the main disease, plays the main role. Whatever may be the starting point, in due course it reaches the ophthalmic tissue via Jatrurdhwa Srotas i.e. Srotas above the neck region.

The course of Samprapti can be described in three parts.

1. Stage of Sirobhishyanda
2. Stage of Netrabhishyanda
3. Stage of Sthanasanshray

### **1. Stage of Sirobhishyanda**

Nidana of endogenic eye diseases are mainly Achakshushya factors, which vitiates Pitta. Due to interconnections of Pitta and Rakta, Raktavaha Srotas also gets vitiated. As the Nidana factors are Achakshushya, Vitiated Pitta and Rakta have affinity towards the eye. These Vitiated Doshas reach Netra through the Raktavaha Sira in Jatrurdhwa Srotas. Before being confined to the eye, there is a stage when Sirasrotas are deeply involved and the stage can be termed as stage of Sirobhishyanda.

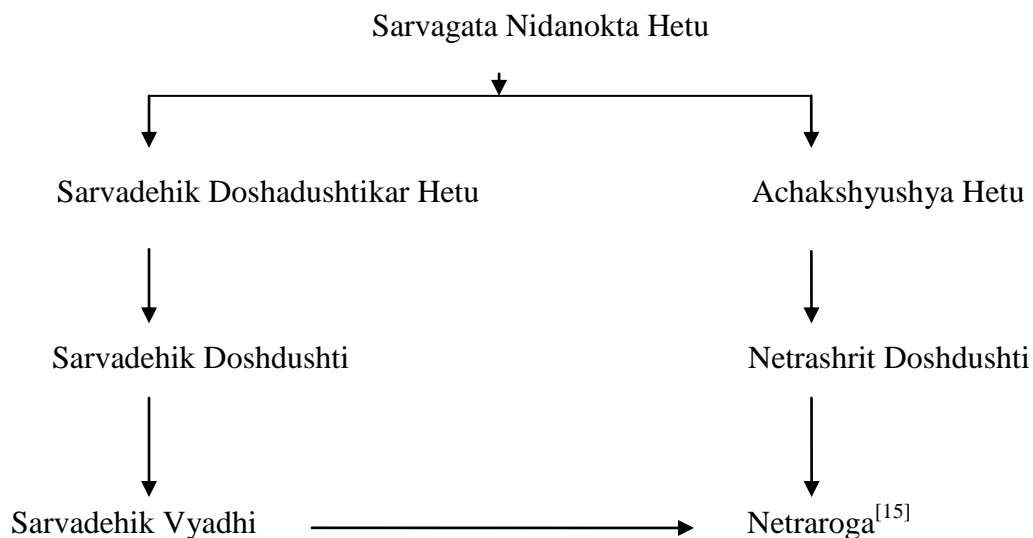
In this stage the Ushna, Tikshna, Sara and Drava Guna of Pitta are increased and the properties of Raktadhatu are deranged. Vessels are dilated and become more permeable. This gives rise to the stage of 'Abhishyanda' which is the initial stage of eye diseases.

### **2. Stage of Netrabhishyanda**

The Samprapti heads towards the Srotas of the eye and the same changes of Sirobhishyanda develops in the Netra Srotas. This is the Netrabhishyanda stage where certain ocular manifestations start to appear which can be considered as the Poorvroopa.<sup>[13]</sup> These are redness, watering, foreign body sensation, irritation and mild pain are the Poorvaroop.

### **3. Stage of Ashrayasthana**

Actual signs and symptoms of the disease are manifested in this final stage where the vitiated Dosha, disease prone area of the eye and Sthanik (Local) Dosha of that area plays important role. Vitiated Vata prone to Vata predominant area (e.g. Krishnamandala i.e. cornea), vitiated Pitta prone to Pitta predominant area (e.g. vascular part) and vitiated Kapha prone to Kapha predominant area (e.g. Shuklamandala and intraocular fluid). The vitiated Dosha has an affinity towards the weak point of the eye.<sup>[14]</sup>



### Examinations of eye

Examination of an eye can be done in two ways as systemic examination of the patient and local eye examination.

Systemic examination is important in case of eye diseases as many of the ophthalmic complains are ocular manifestations of eye diseases. Systemic examination can be done in two ways as Ashtavidh Pariksha and Dashvidha Pariksha. Both includes eye as a Parikshya Bhav in systemic diseases.

Ashtavidh Pariksha includes Nadee (Pulse), Mootra (Urine), Mala (Stool), Jivha (Tongue), Shabda (Voice), Sparsh (Touch), Drik (Eyes), Akriti (Built of body).<sup>[16]</sup>

Ashtavidha Pariksha includes Drik Pariksha which is the main pillar of systemic examination and it proves that every systemic disease have more or less affection of eyes.

In Dashavidha Pariksha, Prakriti Pariksha includes some manifestations of Dosha on eyes as Vata Prakriti have Shyava Netra, Pitta Prakriti have Pingal Netra, Kapha Prakriti have Shukla Netra.<sup>[17]</sup> Other Parikshya Bhava in Dashavidha Pariksha are also important during eye examination to find out the association of systemic condition with eye diseases.

**Dooshya:** Involvement of Dhatu in eye diseases

**Desha:** It is important to assess the vitiated Dosha in the body.

**Balam:** It is important to find out Sharir Bala as well as Vyadhi Bala for the prognostic purpose.

**Kala:** As per Kala predominance of vitiated Dosha can be find out.

**Anal:** Jatharagni and Dhatvagni are the important factors in Dashavidh Pariksha as it gives info about digestive system as well as condition of Dosha and Dhatu.

**Prakriti:** Prakriti of patient gives information of predominant Dosha in eye diseases.

**Vaya:** According to the age the predominance of Dosha changes so it is important Parikshya Bhava in systemic examination of eye diseases.

e.g. Childhood: Kapha; Adult: Pitta; Old age: Vata

**Satvam:** Satva (Mental status) of patient has its direct influence on functioning capacity of eye.

**Satmya:** Habits of patient should be noted during examination as reading, watching T.V, cinema, travelling, sleep, bath, etc.

**Ahara:** Achakshyushya factors should be find out in daily diet and its Rasa, Veerya, Vipaka, as it directly influence the functions of eyes through Raktavaha and Rasavaha Sira (Pittavaha as per Vagbhata).

Local eye examinations include Size, position of eyeball, direction and its movement, colour of eyes, blood vessels, shape and its curvature of cornea, transparency of cornea, depth of anterior chamber, size of pupils, etc.

The compilation of some of the ocular manifestations in systemic diseases is shown in table number 3.

**Table no.3.**

Disease	Symptom On Eye	Dosha
Jwara(Purvarupa)	Nayanplava <sup>[18]</sup>	Pitta
Grahani	Timira <sup>[19]</sup>	Vata
Pandu	Akshikutu Shotha <sup>[20]</sup>	Kapha
Kamala	Haridra Netrata <sup>[21]</sup>	Pitta
Raktapitta	Akshigata Raktasrava <sup>[22]</sup>	Pitta
Rajyakshma	Shukle-Akshno <sup>[23]</sup>	Kapha
Krimi	Shyava Netrata <sup>[24]</sup>	Kapha
Shitapitta	Raktalochanata <sup>[25]</sup>	Pitta
Apana Vayu Avarodha	Drishtivadha <sup>[26]</sup>	Vata
Jarashosha	Akshishushkata,Malachhavi <sup>[27]</sup>	Vata
Mahashwasa	Vibhrantalochana <sup>[28]</sup>	Vata
Annavaha Srotas Viddha	Andhya <sup>[29]</sup>	
Majjakshaya	Timiradarshanam <sup>[30]</sup>	Vata
Arsha(Purvarupa)	Netrashopha <sup>[31]</sup>	Kapha
Kshayaja Kasa	Shrimaddashannetrata <sup>[32]</sup>	Tridosha
Urdhwashwasa	Urdhwadrishtivibhrantaksha <sup>[33]</sup>	Vata
Chhinna Shwasa	Viplutaksha Raktaklochana <sup>[34]</sup>	Vata

Tamakashwasa	Uchhritaksha <sup>[35]</sup>	Kapha ,Vata
Swarabheda	Krishna Nayana <sup>[36]</sup>	Vata
Trishna	Raktekshnatwam <sup>[37]</sup>	Pitta
Unmad	Drishhti Adhirata <sup>[38]</sup>	Vata
Apasmara(Asadhya)	Prachalita Bhrivam <sup>[39]</sup>	Tridosha
Vatavyadhi	Akshihundana <sup>[40]</sup>	Vata
Apatanaka	Vartmastambha <sup>[41]</sup>	Vata
Ardita	Netradinam Cha Vaikritam <sup>[42]</sup>	Vata
Jrimbha Nnirodhaja Udavarta	Akshiroga <sup>[43]</sup>	Vata
Nidrarodhaj Udavarta	Akshijadya <sup>[44]</sup>	Vata ,Kapha

## REFERENCE

1. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri, by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Uttarantra 13/98, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 825.
2. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Sutrasthana 15/3, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 56.
3. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Sharirsthana 6/4, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 329.
4. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 1/20, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 10.
5. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Uttarantra 8/1, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 804.
6. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Sutrasthana 2/5, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 25.
7. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt.



- Hari Sadashiv Shastri Paradkar Bhisagacarya, Sutrasthana 12/67, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 207.
8. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 1/11, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 5.
  9. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 7/3,4, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 31.
  10. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Sutrasthana 27/349-350, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 174.
  11. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Sutrasthana 26/85, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 150.
  12. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Uttarantra 8/1, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 804.
  13. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 1/21,22, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 11.
  14. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Sutrasthana 24/19, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 102.
  15. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Uttarantra 8/2, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 804.
  16. Yogratnakara with Vidyotini Hindi commentary of Vaidya Laxmipati Shastri edited by Bhisagaratna Brahmashankar Shastri, Purvakhanda 1/1, Choukhambha Prakashan, Varanasi, Edition reprint, 1993; 5.
  17. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt.

- Hari Sadashiv Shastri Paradkar Bhisagacarya, Sharirsthana 3/88-100, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 402-404.
18. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 39/25, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 370.
  19. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 15/61, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 518.
  20. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 16/30, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990, p 528.
  21. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 16/127, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 532.
  22. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Nidanasthana 2/8, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 206.
  23. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Nidanasthana 6/13, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 221.
  24. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 43/6, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 281.
  25. Madhavnidanam of Shri Madhavkara with the Madhukosha Sanskrit commentary by Shri Vijayrakshit and Shrikanthadutta with the Vidyotini Hindi commentary by Shri Sudarshan Shastri, Revised and edited by Prof. Yadunandan Upadhyay, Uttarardha, Shitapitta Adhyay/2, Choukhambha Sanskrit Sansthan 27<sup>th</sup> edition, 1997; 168.
  26. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Sutrasthana 4/2, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 53.
  27. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 41/25, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 251.

28. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 17/47, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 535.
29. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Sharirsthana 9/12, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 71.
30. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Sutrasthana 11/19, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 185.
31. Ashtang Hridaya of Vagbhata, Sarvangasundar Tika by Arundatta and Ayurved Rasayan Tika by Hemadri , by Dr. A.M. Kunte and Krsna Ramchandra Shastri Navre, edited by Pt. Hari Sadashiv Shastri Paradkar Bhisagacarya, Nidanasthana 7/15, Choukhambha Surbharati Prakashan, Varanasi, Edition Reprint, 2010; 492.
32. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 18/27, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 541.
33. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 17/50, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 535.
34. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 17/53, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 535.
35. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 17/61, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 535.
36. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 53/4, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 364
37. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 22/14, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 567.

38. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Nidanasthana 7/6, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 223.
39. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 10/12, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 475.
40. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 28/22, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 617.
41. Madhavnidanam of Shri Madhavkara with the Madhukosha Sanskrit commentary by Shri Vijayrakshit and Shrikanthadutta with the Vidyotini Hindi commentary by Shri Sudarshan Shastri, Revised and edited by Prof. Yadunandan Upadhyay, Poorvardha, Vatavyadhi Adhyay, Choukhambha Sanskrit Sansthan 22<sup>nd</sup> edition, 1993; 423.
42. Charaka Samhita Revised by Agnivesha, Dridhabala, Charaka with Ayurved Dipika commentary of Chakrapanidutta edited by Vd Jadavji Trikamji Acharya, Chikitsasthana 28/39, Choukhambha Publication, Varanasi, 7<sup>th</sup> edition, 1990; 618.
43. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 55/11, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 406.
44. Sushruta Samhita of Maharshi Sushruta edited with Ayurvedtattva Sandipika by Kaviraj Ambikadutta Shastri, Uttarantra 55/17, Choukhambha Sanskrit Sansthan, Varanasi, 7<sup>th</sup> Edition, 1990; 408.