

Etiopathogenesis of Abhishyanda (Allergic Conjunctivitis) from Ayurveda and Modern Perspective - A Critical Review

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Abstract: *The term Abhishyanda is used extensively in Ayurvedic literature in different contexts. In Sushruta Samhita it is mentioned that Abhishyanda is the root cause of all the eye diseases. The word Abhishyanda is formed by two words- Abhi and Shyandana, Abhi mean 'all around' and Shyandana mean 'oozing/flowing'. Allergic conjunctivitis is the most common type of eye allergy and is widely experienced by global population. Signs and symptoms of allergic conjunctivitis like redness, itching, watering, burning, F.B. sensation, photophobia and ropy discharge which simulates with signs and symptoms of Abhishyanda explained in our classics. Nidanans of Netra Rogas can be considered as the Nidanans of Abhishyanda Like- sleeping during day time, awaking at night hours, excessive use of sour item, suppression of natural urges, intake of alcohol, working in polluted and smoky area etc. In modern ophthalmology also dust, smoke, pollution, seasonal variation, pollens, mites and pet dander are considered as etiological factors of the disease Simple Allergic. When vitiated Dosha provoked by factors directly affects the ocular surface lead to more vitiation of Rasa and Rakta. These vitiated Rasa and Rakta by Vata lead to the clinical features like watery discharge, itching, Redness etc.*

Keywords: *Abhishyanda, Allergic conjunctivitis, Nidana, Samprapti*

1. Introduction

In the current era human beings are highly exposed to pollution and this introduces contaminants to environment that causes instability, disorder and harm to the ecosystem. Ultimately this entire polluted end in a single word- Allergy.

The basic reason behind the allergic reaction in the body is altered immunity or hypersensitivity. Among the common allergic reaction, one of the common manifestations is ocular allergy because of its constant exposure to external environment. It is proved that conjunctiva mucous membrane is nearly ten times more exposure in comparison to other parts of the body.

Allergic conjunctivitis is the most common type of eye allergy and is widely experienced by global population. It has an equal distribution more or less throughout the world, without any exception to the developed and under developed countries.

The term *Abhishyanda* is used extensively in *Ayurvedic* literature in different contexts. In *Sushruta Samhita* it is mentioned that *Abhishyanda* is the root cause of all the eye diseases.¹ Clinical picture of *Abhishyanda* nearly simulate with the term of "Conjunctivitis"² mentioned in modern terminology.

Allergic conjunctivitis is the most common form of eye allergy and is widely experienced by global population. Having a prevalence rate of 5-22% in general population and a recurrence rate of 41-62 %³. It occurs due to polluted atmosphere and exposure to allergens. Hypersensitivity of the body's immune system to these allergens is the main etiological factor and also it is common in people who have other signs of allergic diseases. Such as hay fever, asthma, eczema and rhinitis. It is the commonest defect affecting the eyes leading to functional disturbances and can even account to impairment of vision if cornea is involved⁴.

Abhishyanda is one among the *Sarvagata Netra Rogas*, which affects all parts of the eye, having good prognosis.⁵ Signs and symptoms of allergic conjunctivitis like redness, itching, watering, burning, F.B. sensation, photophobia and ropy discharge which simulates with signs and symptoms of *Abhishyanda* explained in our classics. It is of four types depending upon the predominant *Dosha* viz- *Vataja, Pittaja, Kaphaja* and *Raktaja Abhishyanda*. In each type of *Abhishyanda* nature of pain, discharge, congestion, edema, etc. varies. On analyzing the signs and symptoms predominant *Dosha* can be assessed. If these *Abhishyanda* are not treated in time it leads to a painful condition called *Adhimantha*⁶.

In *Sushruta Samhita* four separate chapters have been devoted to the treatment of *Abhishyanda* after explaining *Sarvagata Roga*. It should be treated as soon as possible otherwise complications due to *Abhishyanda* will be severe in nature and difficult to save eye sight⁷.

2. Material and Method

References regarding *Abishyanda* were collected from various classical and *Ayurveda* published works, published research papers and previous thesis work and compilation was done on the concept *Abishyanda* and allergic conjunctivitis in detail.

2.1 Review on Abishyanda

The word *Abhishyanda* is formed by two words- *Abhi* and *Shyandana*, *Abhi* mean 'all around' and *Shyandana* mean 'oozing/flowing'. *Shyandana* is a clinical condition in which all supraclavicular channels gets *Shyandatva* due to *Kledana* of *Dosha, Dhātu* and *Mala*. When *Shyandana* takes place in *Netravaha Srotas* and get *Sthanasamsraya* in *Netra* and affecting all around the tissues lead to *Abhishyanda* with predominating feature of discharge from the eyes.

Volume 10 Issue 2, February 2021

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Though in the classics there is no direct reference about definition or pathophysiology of *Abhishyanda*, various scattered references in texts give an idea about this clinical entity.

In the context of *Avapidana Nasya*, *Dalhana* quotes that *Abhishyanda* means “*Medokapha Abhivapta Sira*”⁸. This statement shows that *Abhishyanda* is a clinical stage of *Siras* in which *Medas* and *Kapha Dosha* get *Vapana*.

Acharya Charaka says that *Abhishyanda* is a *Drava Pradhana SleshmaVikara* and he also quotes in the context of prognosis of *Kushtha Sadya* that *Abhishyanda* is a condition in which the *Srotas* get filled with full of *Doshas* i.e. *Apuryamanam*

While explaining the *Gunas* of *Nava Dhanya*, it is said to be *Abhishyandi*, i.e. causes discharge there by obstruction of body channels.

From these references it is clear that *Abhishyanda* is a condition in which all *Netravaha Srotas* get *Shyandatva* and leads to above said clinical entity.

Depending upon predominant *Doshas* involved they had been further classified into four i.e. *Vataja*, *Pittaja*, *Kaphaja* and *Raktaja*.

2.2 Nidana of Abhishyanda

Special *Nidanas* for *Abhishyanda* are not mentioned in any classical texts so general *Nidana* for *Netra Rogas* can be considered as the *Nidanas* of *Abhishyanda*.

Table 1: General Causative Factors According to Various Acharyas:

Causative Factors	Su.U. ⁹	M.N. ¹⁰	B.P. ¹¹	Y.R. ¹²	G.N. ¹³
Diving into water immediately after exposure to heat	+	+	+	+	+
Excessive looking at distant objects	+	+	+	+	+
Sleeping during day/awakening at night	+	+	+	+	+
Excessive weeping	+	+	+	+	+
Anger / grief	+	+	+	+	+
Injury to head	+	+	+	+	+
Excessive use of sour, gruel and vinegar	+	-	+	-	-
<i>Kulattha</i> and <i>Masha</i> pulses	+	-	+	-	-
Suppression of natural urges	+	+	+	+	+
Excessive perspiration	+	+	+	+	+
Smoking or working in smoke	+	+	+	+	+
Suppression of / or excessive vomiting	+	+	+	+	+
Suppressing tears	+	+	+	+	+
Concentrating on minute objects	+	+	+	+	+
Intake of fluids and other foods at night	-	+	-	+	+
Alcohol	-	+	-	+	+
Change of seasons	-	+	-	+	+
Traveling in very high speed	-	-	+	-	-
Working in dusty surrounding		-	-	-	-

The persons working in dusty and polluted atmosphere are more prone to disease *Abhishyanda* – Allergic Conjunctivitis. Among all *Nidanda- Raja Nishevana*, *DhumaNishevana*, *Ratri Jagarana*, *Mithya Ahara*, *Mithya Vihara*, *Ritu Viparyaya* can be considered as special *Nidana* for *Abhishyanda* – Allergic Conjunctivitis. In modern ophthalmology also dust, smoke, pollution, seasonal variation, pollens, mites and pet dander are considered as etiological factors of the disease Simple Allergic Conjunctivitis.

Samprapti:

‘*Samprapti*’ can be explained as the pathological changes evoked by the etiological factors, leading to the manifestation of signs and symptoms of diseases.

General *Samprapti* of *Netra Roga* can be considered as the *Samprapti* of the *Abhishyanda*. It can be understood by studying under two headings:-

- 1) *Samanya Samprapti* of *Netra Roga*.
- 2) *Vishishta Samprapti* of *Abhishyanda*.

1) Samanya Samprapti of Netra Roga:

According to *SushrutaSamhita* due to *Achakshushya Ahara* and *Vihara*, the *Doshas* get vitiated and move towards upper part of body through various *Sira* and *Srotas*. These *Doshas* get localized in the eyes leading to *Netra Rogas*¹⁴. *Acharya Vagbhata* has not explained specific *Nidanas* for *Netra Roga*, but quotes that, the *Achakshushya Nidana* lead to aggravation of *Pitta* predominant *Dosha* and spread to *Urdhva JatruBhaga* through *Sira* and manifests *Akshi Roga*¹⁵. While *Madhava Nidana*¹⁶, *Yogaratakara*¹⁷ and *Gadanigraha*¹⁸, followed the *Sushruta*’s opinion.

2) Vishishta Samprapti of Abhishyanda:

Like any other disease *Abhishyanda* can be divided into various stages on the concepts of *Kriya Kala* like *Sancaya*, *Prakopa*, *Prasara*, *Sthanasamshraya*, *Vyakti* and *Bheda*.

(a) Sanchayavastha:

The *Doshas Sanchaya* that leads to *Netra Roga* by two ways:-

Due to *Achakshushya Ahara – Vihara*, and *Agantuja Nidana Sevana* leads *Tridasha Prakopa* which causes *Agnimandya* and which in turn leads to *Ama* formation and *Srotorodha* then *Vatadi Doshas Dushti* and *Vridhi* takes place in *Koshtha*.

(b) Prakopavastha:

In *Prakopavastha*, provocation of the *Doshas* takes place due to continuous *Nidana Sevana*.

(c) Prasaravastha:

In *Prasaravastha*, diffusion of *Doshas* takes place in whole body through *Siras* and *Srotas* and it ascend towards *Urdhvatratrugata Srotasa*.

(d) Sthanasamshryavastha:

In *Sthanasamshryavastha*, localization of *Doshas* in all parts of the eyes takes place. At that time *Dosha Dushya Samurchana* takes place. In this stage manifestation of the *Poorvaroopalike* redness, itching, pain etc. starts.

(e) Vyaktavastha:

In *Vyaktavastha*, cardinal symptoms of the disease like profuse discharge from all parts of the eye seen. Here depending up on *Vatadi Dosha* predominant *Todadi* features are seen.

(f) Bhedavastha:

If *Abhishyanda* is not treated in *Vyaktavastha* stage it leads to the complication like *Adhimantha* and *Savrana Shukla*¹⁹.

Samprapti Ghataka:

- Dosha* : *Tridosha, Rakta*
- Dushya* : *Rasa and Rakta*
- Agni* : *Mandagni*
- Srotasa* : *Rasavaha and Raktavaha*
- Sroto Dushti* : *Sanga, Vimargagamana and Atipravriti*
- Rogamarga* : *Madhyama*
- Adhishthana* : *Sarvaakshi*
- Vyadhi Svabhava* : *Chirakari*

Poorva Roopa:

Our *Acharyas* have explained *Samanya Poorva Roopa* for all the *Netra Rogas*. Separate *Poorva Roopa* is not explained for all the diseases.

(a) Samanya Poorva Roopa of Netra Roga²⁰

- *Avila* (dirty / muddiness of the eye)
- *Samrambha* (slight congestion, pain and oedema)
- *Ashru* (watering)
- *Kandu* (itching)
- *Upadeha* (stickiness)
- *Guruta* (heaviness)
- *Ushna* (burning sensation)
- *Toda* (pricking pain)
- *Raga* (redness)
- *Shoola* in *Vartma Kosha* (pain at outer and inner canthus of the eye)
- *Shooka Poorna Netra* (foreign body sensation)
- *Vihanyamana Roopa* (visual disturbance)
- *Kriyahani* (hampered functions of any part of the eye).

Roopa:

Full manifestation of the disease is known as *Roopavastha*. These *Roopas* are varying according to the predominance of different *Doshas*. On the basis of *Dosha* predominance *Abhishyanda* is of four type viz. *Vataja, Pitaja, Kaphaja* and *Raktaja Abhishyanda*.

Table 2: Signs and symptoms mentioned for *Vataja Abhishyanda* in different classics

Sign and Symptoms	S.S. ²¹	A.S. ²²	A.H. ²³	M.N. ²⁴	Y.R. ²⁵	G.N. ²⁶
<i>Nistodana</i>	+	-	-	+	+	+
<i>Stambhana</i>	+	-	-	+	+	+
<i>Romaharsha</i>	+	-	-	+	+	+
<i>Sangharsha</i>	+	-	-	+	+	+
<i>Parushya</i>	+	-	-	+	+	+
<i>Shirobhitapa</i>	+	-	-	+	+	+
<i>Vishushka Bhava</i>	+	-	-	+	+	+
<i>Shishirashruta</i>	+	+	+	+	+	+
<i>Nasanaha</i>	-	+	+	-	-	-
<i>Alpa Shopha</i>	-	+	+	-	-	-
<i>Shankha-Akshi-Bhru-Lalata</i>	-	+	+	-	-	-

<i>Toda-Sphurana-Bhedana</i>						
<i>Shushka Dushika</i>	-	+	+	-	-	-
<i>Alpa Dushika</i>	-	+	+	-	-	-
<i>Achchashruta</i>	-	+	+	-	-	-
<i>Chala Ruja</i>	-	+	+	-	-	-
<i>Nimeshonmeshana Krichchata</i>	-	+	+	-	-	-
<i>Jantunam Iva Sarpanam</i>	-	+	+	-	-	-
<i>Akshi Adhamanam Iva Bhati</i>	-	+	+	-	-	-
<i>Sukshma Shalya Ivachita Chakshu</i>	-	+	+	-	-	-

Table 3: Signs and symptoms mentioned for *Pittaja Abhishyanda* in different classics

Sign and Symptoms	S.S. ²⁷	A.S. ²⁸	A.H. ²⁹	M.N. ³⁰	Y.R. ³¹	G.N. ³²
<i>Daha</i>	+	+	+	+	+	+
<i>Prapaka</i>	+	-	-	+	+	+
<i>Shishirabhinanda</i>	+	-	-	+	+	+
<i>Dhumayanam</i>	+	+	+	+	+	+
<i>Bashpasamuchraya</i>	+	-	-	+	+	+
<i>Ushnaashruta</i>	+	-	-	+	+	+
<i>Pitaka Netrata</i>	+	-	-	+	+	+
<i>Shopha</i>	-	+	+	-	-	-
<i>Shyavata</i>	-	+	+	-	-	-
<i>Kledatavam</i>	-	+	+	-	-	-
<i>Raga</i>	-	+	+	-	-	-
<i>Peeta Ashru</i>	-	+	+	-	-	-
<i>Ushna Ashru</i>	-	+	+	-	-	-
<i>Pitabha Darsanam</i>	-	+	+	-	-	-
<i>Ksharoshkshita kshataeva</i>	-	+	+	-	-	-

Table 4: Signs and symptoms mentioned for *Kaphaja Abhishyanda* in different classics

Sign and Symptoms	S.S. ³³	A.S. ³⁴	A.H. ³⁵	M.N. ³⁶	Y.R. ³⁷	G.N. ³⁸
<i>Ushnaabhinanda</i>	+		-	+	+	+
<i>Gurtavam</i>	+	-	-	+	+	+
<i>Shopha</i>	+	-	-	+	+	+
<i>Kandu</i>	+	+	+	+	+	+
<i>Upadeha</i>	+	-	-	+	+	+
<i>Sheetata</i>	+	-	-	+	+	+
<i>Atishaitya</i>	+	-	-	+	+	+
<i>Muhu Srava</i>	+	-	-	+	+	+
<i>Pichchila Srava</i>	+	-	-	+	+	+
<i>Jadyam</i>	-	+	+	-	-	-
<i>Nidra</i>	-	+	+	-	-	-
<i>Annaanabhinanda</i>	-	+	+	-	-	-
<i>Sandra Srava & Dushika</i>	-	+	+	-	-	-
<i>Snigdha Srava & Dushika</i>	-	+	+	-	-	-
<i>Bahu Sweta pichila Srava & Dushika</i>	-	+	+	-	-	-

Table 5: Signs and symptoms mentioned for *Raktaja Abhishyanda* in different classics

Sign and Symptoms	S.S. ³⁹	A.S. ⁴⁰	A.H. ⁴¹	M.N. ⁴²	Y.R. ⁴³	G.N. ⁴⁴
<i>Tamra Ashruta</i>	+	-	-	+	+	+
<i>Lohita Netratvam</i>	+	-	-	+	+	+
<i>Akshe Samntata Rajyam</i>	+	-	-	+	+	+
<i>Rakta Ashru</i>	+	-	-	+	+	+
<i>Raji</i>	-	+	+	+	+	+
<i>Dushika</i>	-	+	+	+	+	+
<i>Rakta Mandala Darsanam</i>	-	+	+	+	+	+
<i>Pittasya Lingani</i>	+	+	+	+	+	+

Upashaya and Anupashaya:

While explaining the disease *Acharya Vagbhata* quoted that *Snigdha* and *Ushna Upachara* relieves the signs and symptoms of the *Vataja Abhishyanda*. *Shishirabhinandanam* relieves the signs and symptoms of *Pittaja Abhishyanda* and *Ushnabhinandanam* relieves the signs and symptoms of *Kaphaja Abhishyanda*.

Sadhyasadhya:

In *Ayurveda*, a detailed description of the prognosis is available, as *Sadhya*, *Krichchha Sadhya*, *Yapya* & *Asadhya*. The prognosis of a disease is usually dependent upon its severity. All *Abhishyandas* are *Vyadhana Sadhya Vyadhi*⁴⁵.

Upadrava of Abhishyanda:

Upadrava are complication occurring due to further progression of the disease. It may occur if not treated in proper time. *Acharya Sushruta* described *Adhimantha* due to complication of the *Abhishyanda*. Four types of *Adhimantha* are explained due to negligence or improper management of respective type of *Abhishyanda*. He also quoted *Hatadhimantha* in case of ignored *Vatadhimantha*⁴⁶.

Chikitsa:

Abhishyanda is a *Sarvagata Vedhya Sadhya Vyadhi*. The dietary measures, medications for *Shodhana* and *Shamana* and various treatment modalities for *Abhishyanda* are explained in detail by *Acharya Sushruta*⁴⁷. The line of treatment of all the *Abhishyanda* is *Langhana*, *Tikta Anna Sevana*, *Lepana*, *Swedana*, *Sira Vedhana*, *Virechana*, *Parisheka*, *Ashchyotana* and *Anjana* respectively⁴⁸. *Acharya Sushruta* has recommended '*Kriyakalpa*' for the management of all *Abhishyanda*, along with other forms of treatment. The term *Kriyakalpa* refers to the treatment, which can be applied for almost all types of eye diseases; and it comprises of *Tarpana*, *Putapaka*, *Anjana*, *Ashchyotana* and *Seka*⁴⁹. Among these *Ashchyotana* is a simple, safer, most economical procedure, which is indicated in the initial stage of the eye diseases. *Ashchyotana* is first line of treatment in all kinds of *Netra Rogas*⁵⁰.

3. Discussion

Abhishyanda is a condition in which all *Netravaha Srotas* get *Shyandatva* and leads to condition like discharge from all parts of eye. *Abhishyanda* is one among the *Sarvagata Netra Rogas* and is considered as the root cause of all type of *Netra Rogas* by all the *Acharyas*⁵¹. *Lakshana* of *Abhishyanda* like *Sangharsha*, *Srava*, *Toda*, *Daha*, *Ragata*, *Guruta*, *Kandu* etc are similar with modern aspect of symptoms of allergic conjunctivitis viz. watering, foreign body sensation, burning, itching, discharge, and redness etc⁵².

Separate *Nidanas* for *Abhishyanda* are not mentioned in any classical texts by our *Acharya*, so general *Nidanas* of *Netra Rogas* can be considered as the *Nidanas* of *Abhishyanda*. These are- sleeping during day time, awaking at night hours, excessive use of sour item, suppression of natural urges, intake of alcohol, working in polluted and smoky area etc. In modern ophthalmology also dust, smoke, pollution, seasonal

variation, pollens, mites and pet dander are considered as etiological factors of the disease Simple Allergic⁵³.

Vitiated and already accumulated *Dosha* in an individual, when provoked by the immediate provoking factors directly affecting the ocular surface lead to more vitiation of *Rasa* and *Rakta* (*Siragata*). These vitiated *Rasa* and *Rakta* by *Vata* lead to the clinical features like watery discharge, itching, Redness etc⁵⁴.

4. Conclusion

Usually the term *Abhishyanda* can be correlated with "Conjunctivitis" but separate concept of Allergic conjunctivitis is not explained by our *Acharya*. Allergic Conjunctivitis is the most common type of eye allergy and is widely experienced by global population. Due to increase incidence of allergens worldwide and environmental pollution, it stands to be an unsolved mystery of modern medicine. Clinical picture of *Abhishyanda* nearly simulate with the term of "Conjunctivitis" mention in modern terminology.

References

- [1] Sushruta samhita, uttara tantra chap-6/by ambikadatta shastri 11th edition page 608
- [2] Sushruta samhita utaratantra 6th chap/ 6-9by ambikadatta shastri 11th edition, page 608
- [3] <http://www.researchandmarket.com/research/cf675c/allergicconjunctivitis> downloaded on 13/03/11
- [4] http://www.worldallergy.org/professional/allergic_diseases_center/conjunctivitis/conjunctivitisynopsis.shtml downloaded on 13/03/11
- [5] Sushruta samhita utaratantra 6th chap/10, by ambikadatta shastri 11th edition page 608
- [6] Ashtanga Hridaya Uttarasthana 15/3-4 with Tatvabodhaka Vyakhyana By Shivadasa Sena, Edition I, Swami Lakshmi Rama Trust, 1942. pg. 984
- [7] Vriddha Vagbhata, Ashtanga Samgraha with indu commentary edited by Dr.Shiva Prasada Sharma 2006, Uttara Tantra 19/56 pg.725
- [8] Sushruta samhita chikitsastana With Ayurveda Tatvasamdeepika Hindi Commentary 40th chap/44 by Kaviraj Ambikadatta Shastri, Chaukhamba Sanskrit Series, Varanasi, 1996. P-603
- [9] Sushruta Samhita Uttara Tantra 1/20 By G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi pg.597
- [10] Madava Nidana, 59/1-2, With Madhukosha Vyakhyana By Vijayarakshita & Shrikantadatta, Ed. Yadavji Trikamji Acharya, Edition V, Nirnaya Sagar Press, Mumbai, 1955 p-202
- [11] Bhavamishra. Bhavaprakasha, With Vimarsha By K.C.Chunekar, Chaukhamba Bharati, Varanasi . 63/7-9
- [12] Yogaratnakara chap-5/7-9 Hindi commentary by Laxmipati Shastri III Edi. 1983 Chaukhamba Sanskrit Sansthan, Varanasi. pg.756
- [13] Shodhala, Gadhanigraha, by Indradev Tripathi, 3rd edition 1999, charu printer, 3/1-3, p-62
- [14] Sushruta Samhita Uttara Tantra 1/20 By G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba

- Vidya Bhavan, Varanasi, pg.597
- [15] Ibid Ashtanga Samgraha Uttarantra 11/2 pg.686 and Ibid Ashtanga Hridaya Uttarasthana 8/1-2 pg. 935
- [16] Madhava Nidana 59/3 With Madhukosha Vyakhya By Vijayarakshita & Shrikantadatta, Ed. Yadavji Trikamji Acharya, Edition V, Nirnaya Sagar Press, Mumbai, 1955,p-202
- [17] Yogaratnakara,VodyotininTikka, by Dr.Indradeva Tripathi,Chaukhamba Sanskrit Series office 7th edition 2002, chap 10,pg.756
- [18] Shodhala,Gadanigraha,By.Dr,Indradev Tripathi,3rd edition 1999, Charu printers, 3/1-3, pg.62
- [19] Ashtanga Hridaya Uttarasthana 15/3-4 with Tatvabodhaka Vyakhya by Shivadasa Sena, Edition I, Swami Lakshmi Rama Trust, 1942 pg. 984
- [20] Sushruta Samhita Uttara Tantra 1/21-23 By G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi.pg.597
- [21] Sushrut .Uttara tantra.6/6 By G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi.pg.597
- [22] Astangra.Sangraha.Uttara tantra.18/24, with Indu Commentary, Ed. Athavale A.D., Atreya Prakashana, Pune, 1980. P-686
- [23] Vagbhata. Ashtanga Hridayam Uttarantra 15/1-2 with Bhagirathi Tippani (Taradatta Panna) Edition II, Chaukhamba Sanskrit Series Office, Varanasi, 1980. P- 935
- [24] Madava Nidana,59/5 ,With Madhukosha Vyakhya By Vijayarakshita & Shrikantadatta, Ed. Yadavji Trikamji Acharya, Edition V, Nirnaya Sagar Press, Mumbai, 1955,p-202
- [25] Yogaratnakara,VodyotininTikka, by Dr.Indradeva Tripathi,Chaukhamba Sanskrit Series office 7th edition 2002, chap 5,pg.756
- [26] Shodhala,Gadanigraha,By.Dr,Indradev Tripathi,3rd edition 1999, Charu printers, 3/1-3, p-62
- [27] Sushrut Samhita Uttara tantra.6/6 By G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi p-608
- [28] Astangra.Sangraha.Uttara tantra.18/24 with Indu Commentary, Ed. Athavale A.D., Atreya Prakashana, Pune, 1980. P-686
- [29] Astrangra.Hridaya.Uttara tantra.15/1-22 with Bhagirathi Tippani (Taradatta Panna) Edition II, Chaukhamba Sanskrit Series Office, Varanasi, 1980. P- 935
- [30] Madhava.Nidana.59/5 With Madhukosha Vyakhya By Vijayarakshita & Shrikantadatta, Ed. Yadavji Trikamji Acharya, Edition V, Nirnaya Sagar Press, Mumbai, 1955,p-202
- [31] Yoga.Ratnakar.chapter 5 VodyotininTikka, by Dr.Indradeva Tripathi,Chaukhamba Sanskrit Series office 7th edition 2002,pg.756
- [32] Gada.Nigraha.3/5 by Sri Vaidya Shodhala, 3rd edition, charu printers,Varanasi,p-62
- [33] Sushrut samhita.Uttara tantra.6/6 By G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi p-608
- [34] Astanga.Sangraha.Uttara tantra.18/24 with Indu Commentary, Ed. Athavale A.D., Atreya Prakashana, Pune, 1980. P-686
- [35] Astangra.Hridaya.Uttara tantra.15/1-2 with Bhagirathi Tippani (Taradatta Panna) Edition II, Chaukhamba Sanskrit Series Office, Varanasi, 1980. P- 935
- [36] Madhava.Nidana.59/5 with Madhukosha Vyakhya By Vijayarakshita & Shrikantadatta, Ed. Yadavji Trikamji Acharya, Edition V, Nirnaya Sagar Press, Mumbai, 1955,p-202
- [37] Yoga.Ratnakar.chapter 5, VodyotininTikka, by Dr.Indradeva Tripathi,Chaukhamba Sanskrit Series office 7th edition 2002,pg.756
- [38] Gada.Nigraha.3/5 by Sri Vaidya Shodhala, 3rd edition, charu printers,Varanasi,p-62
- [39] Sushrut samhita.Uttara tantra.6/6 By G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi p-608
- [40] Astanga.Sangraha.Uttara tantra.18/24 with Indu Commentary, Ed. Athavale A.D., Atreya Prakashana, Pune, 1980. P-686
- [41] Astangra.Hridaya.Uttara tantra.15/1-2 with Bhagirathi Tippani (Taradatta Panna) Edition II, Chaukhamba Sanskrit Series Office, Varanasi, 1980. P- 935
- [42] Madhava.Nidana.59/5 with Madhukosha Vyakhya By Vijayarakshita & Shrikantadatta, Ed. Yadavji Trikamji Acharya, Edition V, Nirnaya Sagar Press, Mumbai, 1955,p-202
- [43] Yoga.Ratnakar.chapter 5, VodyotininTikka, by Dr.Indradeva Tripathi,Chaukhamba Sanskrit Series office 7th edition 2002,pg.756
- [44] Gada.Nigraha.3/5 by Sri Vaidya Shodhala, 3rd edition, charu printers,Varanasi,p-62
- [45] Sushruta Samhita Uttara Tantra 8/8 by G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi p-610
- [46] Sushruta Samhita Uttara Tantra 6/10 and 23 by G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi p-304
- [47] Sushruta Samhita Uttara Tantra chapter 9 by G.D. Singhal And K.R. Sharma, IMS, BHU, Varanasi, Chaukhamba Vidya Bhavan, Varanasi p-610 to 612
- [48] Shodhala,Gadanigraha,3rd edition 1999, Charu printers,3/99,pg-94
- [49] Sushruta samhita utarantra 18th chap/4, with Nibandhasamgraha Vyakhya By Dalhana, Ed. Yadavji Trikamji Acharya, Chaukhamba Sanskrit Series, Varanasi. P- 635
- [50] Astanga hridaya sutrastana, 23rd chap/1, by dr vramanand tripathi , p- 263
- [51] Ashtanga Samgraha Uttarantra 19/2 with Indu Commentary, Ed. Athavale A.D., Atreya Prakashana, Pune, 1980.p-717
- [52] Sushruta samhita utarantra 6th chap/ 6-9, with Nibandhasamgraha Vyakhya By Dalhana, Ed. Yadavji Trikamji Acharya, Chaukhamba Sanskrit Series, Varanasi. P- 608
- [53] American Academy of Family Physicians. (2008). *Allergic conjunctivitis*. Retrieved March 22, 2009, from the FamilyDoctor.
- [54] Sushruta Samhita Uttara Tantra,1/20 With Nibandhasamgraha Vyakhya By Dalhana, Ed. Yadavji Trikamji Acharya, Chaukhamba Sanskrit Series, Varanasi. P-597