A comparative study on effect of *bilvadi yogaashchyotana* and *haritaki vidalaka* in the management of *vataja abhishyanda* w.s.r. to simple allergic conjunctivitis.

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ABSTRACT

*Acharya Sushruta* has explained the disease *Netra Abhishyanda* as one of the *Aupasargika Rogas*. It is the root cause of all eye diseases. *Acharyas* have explained *Vataja Abhishyanda* as *Sarvagata Vyadhi*. The numbers of *Sarvagata Rogas* are seventeen according to *Sushruta Samhita*. *Vataja Abhishyanda* is produced when the vitiated *Doshas* are situated in all parts of the eyes, particularly in the ocular surface. The signs and symptoms like *Nistoda* (Pain), *Stambha* (Stiffness of lids), *Sangarsha* (Foreign body sensation), *Parushya*, *Vishushkabhava* (Feeling of dryness), *Shishirashruta* (Cold lacrimation) described in *Vataja Abhishyanda* seems to be similar to the characteristic features of the simple allergic conjunctivitis viz. watery discharge, foreign body sensation, pricking pain etc. The clinical study was done on 30 patients of *Vataja Abhishyanda* in two different groups. Group A was treated with *Bilvadi yogaashchyotana* and Group B was treated with *haritakividalaka*. After the registration of patients for this study sign and symptoms such as *Nistoda, Stambha, Sangarsha, Vishushkabhava, Shishirashruta, Kandu* and *Raga* were recorded before, during and after the treatment.

**Keywords**: *Vataja Abhishyanda*, Simple allergic conjunctivitis, *Bilvadi yoga ashchyotana*, *haritakividalaka*, *Abhishyanda, Sarvagata Vyadhi, Nistoda, Stambha, Sangarsha, Vishushkabhava, Shishirashruta*

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Introduction:

*Shalakya Tantra* is an important branch which dealing with diseases of *Urdha Jathru* (above the clavicle) and *Netra Rogas* are hence described in detail. *Abishyanda* is a *Sarvagata Netara Roga* which is derived from two words viz. “Abhi” and “Syandana”.
“Abhi” means profuse and “Syandana” means discharge or secretion and combined meaning is profuse discharge from all parts of the eye. Netra Abishyanda is considered as ‘root cause’ for almost all affections of the eyeball\(^5\). Netra Abishyanda is classified into four types according to Dosha predominance viz. Vataja, Pittaja, Kapaja and Raktaja Abishyanda\(^2\). Vataja Abishyanda is characterized by Nistoda (Pricking Pain), Sangarsha (Foreign body sensation), Shishirashruta (Watering discharge/ Cold lacrimation), Alpa Shopa (Mild Chemosis), Vishushkabhava (Feeling of dryness), Parushya (Dryness)\(^3\) etc. which are very similar to the most signs and symptoms of the simple allergic conjunctivitis. Hence Vataja Abishyanda can be correlated with simple allergic conjunctivitis.

Allergic conjunctivitis is the most common type of eye allergy and is widely experienced by the global population. The incidence appears to be increased, possibly due to air pollution and wide spread allergens worldwide\(^4\). The basic reason behind the allergic reactions in the body is altered immunity of hypersensitvity. The most common causes for allergic reactions are because of constant exposure to external environment. It is proved that conjunctival mucous membrane is nearly ten times more exposed in comparison to other parts of the body. When our eyes are exposed to any allergens like dust, smoke, animal-dander, mites, pollens etc. then histamine is released and the blood vessels in conjunctiva become swollen.

Allergic conjunctivitis is the most prevalent disease and has an equal distribution more or less throughout the world, without any exception to the developed and under developed countries. It has a prevalence rate of 5-22% in general population and a recurrence rate of 41-62%. No such effective drug is available in the modern ophthalmology which can cure the disease allergic conjunctivitis completely. Moreover after stopping the treatment symptoms of the disease re-occur. Hence keep in all these points in mind it was decided to evaluate the efficacy of Bilvadi yoga Aschyothana and Haritaki Vidalaka on Vataja Abishyanda with special reference to simple allergic conjunctivitis.

**Aims and Objectives:**

- To explore the disease Vataja Abhishyanda and simple allergic conjunctivitis as Ayurveda and Modern parlance.
- To assess the efficacy of Bilvadi yoga Aschyotna and Haritaki Vidalaka in the management of Vataja Abhishyanda
- To provide an effective, economic and easily available regime for the Vataja Abhishyanda.

**Materials and Methods**

**Selection of patients:**

Patients attending the O.P.D. and I.P.D. of Netra Roga unit of Shalakya department of N.I.A. Hospital with signs and symptoms of Vataja Abhishyanda or Simple Allergic Conjunctivitis, between the age group of 15–70 years were selected for the present study. A total number of 30 patients were selected and divided into two groups with 15 patients in each group.

**Exclusion Criteria:**

1. Patients not willing for trial.
2. Abhishyanda associated with Corneal Ulcer.
3. Abhishyanda associated with Trachoma.
4. Simple Allergic conjunctivitis with other forms of allergy like skin rash and allergic Asthma.
5. Any individual above 70 years and below 15 years of age either of any sex.
6. Cases complicated with dacryocystitis.
7. Patients suffering from other systemic disorders.

**Method of study:**

Total 30 patients were selected for present study who fulfilled the criteria of diagnosis and consented for study. They all were treated with Bilvadi Ashchyotana and Haritaki Vidalaka for local application.

**Grouping of patients:**
Group A: *Bilvadi Yoga Ashchyotana*

**Drug:** Bilvadi Yoga  
**Dose:** 2 drops five times daily for local application.  
**Duration:** 15 days

Group B: *Haritaki Vidalaka*

**Drug:** Haritaki Bhristha choorna with Ghrita  
**Dose:** 5 gm of *Haritaki Churna* (Powder) and fried with 1 tea spoon of Ghrita for each eye.  
**Duration:** 15 days

**Duration of the Trial:**
The trial of the therapy was carried for 15 days.

**Follow Up**
The follow up study was done once in 15 days after treatment for month.

**Preparations of drug:**

*Bilvadi Yoga Ashchyotana*[^1]:

*Bilva, Agnimantha, Shyonaka, Gambhari, Patala, Eranda, Brihati, Madhu Shigru*

*Bilvadi Yavkuta Churna* was taken in one part (10gm) to that ten times water (100ml) was added and boiled till one fourth quantity (025 ml) remains and then filtered. When *Kwatha* becomes luke warm then filtered solution was transferred in sterile plastic bottles of 5 mlunder aseptic conditions. Plugging and capping was also done in asptic condition then instillation of 10 drops was done with eye drops bottle from 2 Angula heights in *Kaninikasandhi* (Inner canthus area).

*Haritaki Vidalaka*[^6]:

*Haritaki, Ghrita*

One tea spoon full (tsf) of *Haritaki Churna* is taken and mixed with a tea spoon full (tsf) of Ghrita and fried in a fry pan for 2 minutes at *Kriyakalpa* unit of PG Department of Shalakya Tantra N.I.A. Jaipur. The paste was applied on closed eyes leaving eye lashes and left it in place for 15 minutes and later removed it gently with Luke warm water and cotton.

**Criteria for Assessment:**
The signs and symptoms were assessed by adopting suitable scoring method. The details are as follows:

1. **Nistoda** (Pricking sensation):  
   - Absent – no pain 0  
   - Occasionally present and mild 1  
   - Intermittently present and moderate 2  
   - Present almost all the time severe 3

2. **Stambha** (Stiffness of lids):  
   - Absent (No Stambha ) 0  
   - Occasionally feeling of Stambha of lids. 1  
   - Intermittently and mild feeling of Stambha of lids 2  
   - Feeling of Stambha of lids & Eye ball almost all the time 3

3. **Sangharsha** (Foreign body sensation):  
   - Absent 0  
   - Occasionally present 1  
   - Intermittently present 2  
   - Present almost all the time, continuously 3
4. Vishushka Bhava (Feeling of Dryness)
- Absent – no feeling of dryness 0
- Occasionally present and mild 1
- Intermittently present and moderate 2
- Almost all the time and severe 3

5. Shishirasruta (Cold lacrimation)
- Absent 0
- Mild and occasionally needs to wipe 1
- Moderate and needs to wipe frequently 2
- Severe and needs to wipe almost all the time 3

6. Kandu (Itching)
- No Itching 0
- Occasional sensation of itching not requiring to rub eye 1
- Intermittent sensation of itching requiring to rub eye 2
- Continuous itching which requires rubbing 3

7. Raga (Congestion of conjunctiva)
- No congestion 0
- Congestion in Palpebral Conjunctival 1
- Congestion in Bulbar Conjunctival 2
- Congestion in Both Palpebral & Bulbar 3

Statistical analysis
The information regarding demographic data was given in percentage. The scoring of assessment criteria was analyzed statistically in terms of mean values of B.T. (Before Treatment), A.T. (After treatment), S.D. (Standard Deviation), and S.E.M. (Standard Error of Mean).

The results obtained were considered significant if p-value \( \leq 0.05 \) and non-significant if p-value \( > 0.05 \).

For non-parametric data in individual group Wilcoxon matched pairs signed-ranks test was applicable to check the statistical significance level and for intergroup comparison Mann-Whitney test was applied.

Observations and Results

Description of demographic status

Age:
In the present study maximum number of patients i.e. 62.5\%(20 patients) belonged to age group of 15-30 years, followed by 34.37\% (11) patients to 31-45 years of age group and 3.33\% (1) patients were related to the age group of 46-60 years.

Sex:
In the present study, maximum numbers of patients i.e. 71.87\% and comparatively male ratio is more than female.

Religion:
It is evident from present study that maximum i.e. 93.75\% (30) patients were Hindus while others were Muslims.

Occupation:
On considering the nature of occupation, it was observed that maximum i.e. 34.38\% (11), patients were students and 15.62\% (5) patients were housewives.

Marital Status:
There is equal percentage 50\% (16) of both married and unmarried.

Socioeconomic status:
In the present study, maximum i.e. 84.38\% (27) patients were belonged to middle class while 15.62\% (5) patients were from lower class society. This indicates the general middle class trend of patients attending the government hospital. In lower middle and poor socio-economical persons, low calorie diet and unhygienic conditions may play a key role in manifestation of Netra Rogas as well as Vataja Abhishyanda– Simple Allergic Conjunctivitis.

Education:
The educational status of the present series reveals that amongst 32 patients maximum numbers of patients...
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i.e. 78.13% were Literate, and 21.87% (3) patients were illiterate. There are no direct relation between education and the disease Vataja Abhishyanda– Simple Allergic Conjunctivitis mentioned in the text, but it can be said that education is not sufficient to become aware about disease Vataja Abhishyanda– Simple Allergic Conjunctivitis.

Habitat:

It was observed in the present clinical study that maximum number of patients i.e. 78.13 % (25) belonged to urban area and 21.87% (7) patient’s belonged to rural area. This may be due to the location of the hospital where the study was performed.

Onset of disease:

The present study reveals that the Onset of disease Vataja Abhishyanda– Allergic Conjunctivitis was of sudden onset in i.e. 90.62% (29) and of gradual onset disease in 9.38% (3) patients. It shows that if patients are not taking proper care for avoidance of contact with the allergen to the ocular surface, the conjunctiva becomes sensitive and reacts immediately.

Diet:

It was found that maximum i.e. 53.12 % (17) patients were taking vegetarian diet, while 46.88 % (15) were taking mixed type of diet. The dietary habit of a person is based on the choice, availability and religious customs of the person. So, this cannot be inferred that persons taking vegetarian diet are more prone to Vataja Abhishyanda– Allergic Conjunctivitis. This shows the prevalence of vegetarian diet in Jaipur.

Bowel habit:

In the present study, it was observed that most of the patients i.e. 84.37% (27) were having regular bowel habits, while 15.63% (5) patients were having irregular bowel habits. As we know that Apana Vikriti causes Asamyaka Mala Prawritti and Apana is that Vayu which controls the other four Vayu. Thus, the Apana Vikriti produces Samana Vikriti leading to Asamyaka Pachana and leading to Asamyaka Dhatu and Ama Utpatti.

It was observed that maximum patients had normal bowel habit in contrast to the pathogenesis of maximum diseases which can be attributed to abnormal bowel habit. Thus, it can be concluded from the above mentioned data that irregular bowel or constipation may promote the manifestation of disease Vataja Abhishyanda – Simple allergic Conjunctivitis as they cause Vatadi Doshavitiation in some of selected patients.

Micturition:

In the present study, it was observed that maximum i.e. 81.25% (27) patients were having normal micturition while 18.75% (6) patients were having irregular micturition habits.

It was observed that some patients had varied micturation habit. Thus, it can be understood from the above mentioned data that irregular micturation is probably involved in the manifestation of disease Vataja Abhishyanda – Simple Allergic conjunctivitis as they causing Vata Dosha vitiation.

Addiction:

In the present study 6.25% (2) patients were having habit of Tea/coffee, 12.5% (4) patients were having habit of smoking, 6.25% (4) patients were having habit of tobacco chewing, 18.75% (2) were having habit of Alcohol and no addiction was found in 71.87% (23) patients.

The patients habituated with Tea/Coffee, Smoking, Alcohol and tobacco found in the series may be taken as indicative of the general addiction and habits of the people of that particular area. Dhuma Nishevanam (smoking) as a risk factor has been depicted by Acharya Sushruta in Uttartantra. The modern medical science also has considered the smoking and alcohol as the risk factors for the manifestation of ocular disorders.

Sharira Prakriti:

In the present study that maximum i.e. 56.25% (18) patients had Vata-Pitta Prakriti and 28.12% (9) patients had Vata-Kapha Prakriti and 15.63% (5) had Pitta-Kapha Prakriti. This study has been carried out on Vata predominant condition of the Abhishyanda, and it occurs due to aggravation of Vata as depicted in
Ayurvedic texts. Above data supports the Vata Pradhana Prakriti of the patients. As this sample is very small, no definite correlation between Sharira Prakriti and Vataja Abhisyanda – Simple allergic conjunctivitis occurrence of could be established.

Sara:

The data shows that maximum i.e. 84.38% (27) patients were of Madhyama Sara, 12.5%(4)were of Avara Sara and 3.12% (1) were of Pravara Sara. Sarata is the indicator of the Bala Pramana i.e. 84.38% (27) patients had Madhyama Bala Pramana. From the above facts it cannot be inferred that the less the Sara of patient the more he is prone to the disease Vataja Abhisyanda – Simple Allergic Conjunctivitis. As incidence of Madhyama Sara is more as compared to Avara Sara in general in the present study hence maximum percentage was found in Madhyama Sara.

Samhanana:

Samhanana wise distribution shows that 3.12% (1) patients were Pravara in Samhana, 78.13 % (25) patients were Madhyama in Samhanana and 18.75%(6) patients were Avara in Samhanana. In the present study maximum patients had Madhyama Samhanana.

Satmya:

The data suggests that maximum i.e. 90.62% (29) patients were of Madhyama Satmya, 6.25% (2) patients were of Avara Satmya and 3.13% (1) patients were of Pravara Satmya. A good number of patients were accustomed to diet having dominance of Katu and Amla Rasa, the excessive use of which is said to be Vatavardhaka and Achakshushya by the Acharyas. Such persons may have more chances of developing Vataja Abhisyanda – Simple Allergic Conjunctivitis.

Satva:

Maximum number of patients i.e. 68.75% (22) patients had Madhyama Satva. There is no close relation between the Satva of individuals and the disease Vataja Abhisyanda – Simple Allergic Conjunctivitis.

Abhyaharana, Jarana Shakti:

Maximum no. of patients showed Madhyama Abhyaharana and Jarana Shakti i.e. respectively 65.62% (21) and 59.37% (19). Abhyaharana Shakti means the assimilation capacity of the person. Jarana Shakti means the digestive capacity of the person.

Vyayama Shakti:

75% (24) patients were having Madhyama Vyayama Shakti, 21.88% (7) patients had Avara Vyayama Shakti followed by Pravara Vyayama Shakti i.e. 3.12% (1). Vyayama Shakti (Bala) means power of body. In any disease if Bala of Sharira is less, then the progress of the disease in that Sharira gets fast. The lesser the Sharira Balat he lesser will be the immunity and hence likelihood of the disease.

Vaya:

65.62% (21) patients were having Balavaya and 34.38% (11) were having Madhyama Vaya. Now a days young age and children mainly affected from this disease due to pollution, dust and wind. Children were having less immunity power so they mainly affected.

Sign of Simple Allergic conjunctivitis on Palpebral Conjunctiva:

The data shows that in signs of Simple Allergic Conjunctivitis in Palpebral Conjunctiva 3.12% (1) patients had Normal conjunctiva, 96.87% (31) patients had Congestion, 50% (16) had Follicles, 25 % (8) had Papillae and 9.37% (3)  had Concretion. This shows that Congestion, Follicle and Papillae and concretions are commonly seen in patients of Simple Allergic Conjunctivitis in Palpebral Conjunctiva.

Sign of Simple Allergic conjunctivitis on Bulbar Conjunctiva:

The data shows that in Signs of Simple Allergic Conjunctivitis in Bulbar Conjunctiva 21.87% (7) patients had Normal conjunctiva, 78.12% (25) patients had Congestion, 6.25% (2) had Chemosis of Bulbar Conjunctiva. These indicate that Congestion and Chemosis are seen commonly in Simple Allergic Conjunctivitis.
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**Symptoms of Vataja Abhishyanda:**

The data shows that 93.75% (30) patients were having *Nistoda*, 46.87 % (15) were having *Stambha*, 100% (32) were having *Sangarsha*, 43.75% (14) were having *Vishushkabhava*, 100% (32) were having *Shishirashruta* and 100% (32) were having *Kandu*, 100% (32) patients were having *Raga*.

**Effect of Therapy**

Table No I. The effect of therapy on Clinical Features in Group-A (Wilcoxon matched paired signed ranked test)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Clinical Features</th>
<th>Mean Score Before Treatment</th>
<th>Mean Score After Treatment</th>
<th>Difference</th>
<th>% of Relief</th>
<th>SD</th>
<th>SEM</th>
<th>p-value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nistoda</td>
<td>1.467</td>
<td>1.000</td>
<td>0.466</td>
<td>31.81%</td>
<td>0.639</td>
<td>0.165</td>
<td>≤0.05</td>
<td>S</td>
</tr>
<tr>
<td>2</td>
<td>Stambha</td>
<td>0.533</td>
<td>0.333</td>
<td>0.200</td>
<td>37.50%</td>
<td>0.414</td>
<td>0.106</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>3</td>
<td>Sangarsha</td>
<td>2.000</td>
<td>1.200</td>
<td>0.800</td>
<td>40%</td>
<td>0.560</td>
<td>0.144</td>
<td>≤0.001</td>
<td>S</td>
</tr>
<tr>
<td>4</td>
<td>Vishushkabhava</td>
<td>0.666</td>
<td>0.133</td>
<td>0.533</td>
<td>79.99%</td>
<td>0.743</td>
<td>0.191</td>
<td>≤0.05</td>
<td>S</td>
</tr>
<tr>
<td>5</td>
<td>Shishirashruta</td>
<td>1.467</td>
<td>0.666</td>
<td>0.800</td>
<td>54.53%</td>
<td>0.560</td>
<td>0.144</td>
<td>≤0.001</td>
<td>S</td>
</tr>
<tr>
<td>6</td>
<td>Kandu</td>
<td>1.933</td>
<td>1.133</td>
<td>0.800</td>
<td>41.38%</td>
<td>0.560</td>
<td>0.144</td>
<td>≤0.001</td>
<td>S</td>
</tr>
<tr>
<td>7</td>
<td>Raga</td>
<td>2.267</td>
<td>1.133</td>
<td>1.133</td>
<td>49.97%</td>
<td>0.915</td>
<td>0.236</td>
<td>≤0.001</td>
<td>S</td>
</tr>
</tbody>
</table>

n= 30, S: Significant, NS: Not significant, SD: Standard deviation, SEM: Standard error of mean

Table No II. The effect of therapy on clinical features in Group-B (Wilcoxon matched paired signed ranked test)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Clinical Features</th>
<th>Mean Score Before Treatment</th>
<th>Mean Score After Treatment</th>
<th>Difference</th>
<th>% of Relief</th>
<th>SD</th>
<th>SEM</th>
<th>p-value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nistoda</td>
<td>1.667</td>
<td>0.800</td>
<td>0.866</td>
<td>51.99%</td>
<td>0.516</td>
<td>0.133</td>
<td>≤0.001</td>
<td>S</td>
</tr>
<tr>
<td>2</td>
<td>Stambha</td>
<td>0.8000</td>
<td>0.066</td>
<td>0.733</td>
<td>91.66%</td>
<td>0.883</td>
<td>0.228</td>
<td>≤0.05</td>
<td>S</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>S. No</th>
<th>Symptoms</th>
<th>Mean of Group</th>
<th>SD of Group</th>
<th>SEM of Group</th>
<th>U</th>
<th>p-value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Sangarsha</td>
<td>1.933</td>
<td>1.533</td>
<td>0.400</td>
<td>20.69%</td>
<td>0.507</td>
<td>0.130</td>
</tr>
<tr>
<td>4</td>
<td>Vishushkabhava</td>
<td>0.533</td>
<td>0.400</td>
<td>0.133</td>
<td>24.99%</td>
<td>0.351</td>
<td>0.090</td>
</tr>
<tr>
<td>5</td>
<td>Shishirashruta</td>
<td>1.667</td>
<td>1.133</td>
<td>0.533</td>
<td>31.99%</td>
<td>0.516</td>
<td>0.133</td>
</tr>
<tr>
<td>6</td>
<td>Kandu</td>
<td>2.067</td>
<td>1.533</td>
<td>0.533</td>
<td>25.80%</td>
<td>0.516</td>
<td>0.133</td>
</tr>
<tr>
<td>7</td>
<td>Raga</td>
<td>2.733</td>
<td>1.867</td>
<td>0.866</td>
<td>31.71%</td>
<td>0.743</td>
<td>0.191</td>
</tr>
</tbody>
</table>

n=30, S: Significant, NS: Not significant, SD: Standard deviation, SEM: Standard error of mean

Table No III. Intergroup comparison of Subjective Parameter of *Vataja Abhishyanda* (Mann Whitney test)

<table>
<thead>
<tr>
<th>S No</th>
<th>Symptoms</th>
<th>Mean of Group</th>
<th>SD of Group</th>
<th>SEM of Group</th>
<th>U</th>
<th>p-value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nistoda</td>
<td>0.466</td>
<td>0.866</td>
<td>0.639</td>
<td>0.516</td>
<td>0.165</td>
<td>0.133</td>
</tr>
<tr>
<td>2</td>
<td>Stambha</td>
<td>0.200</td>
<td>0.733</td>
<td>0.414</td>
<td>0.883</td>
<td>0.106</td>
<td>0.228</td>
</tr>
<tr>
<td>3</td>
<td>Sangarsha</td>
<td>0.800</td>
<td>0.400</td>
<td>0.560</td>
<td>0.507</td>
<td>0.144</td>
<td>0.130</td>
</tr>
<tr>
<td>4</td>
<td>Vishushkabhava</td>
<td>0.533</td>
<td>0.133</td>
<td>0.743</td>
<td>0.351</td>
<td>0.191</td>
<td>0.090</td>
</tr>
<tr>
<td>5</td>
<td>Shishirashruta</td>
<td>0.800</td>
<td>0.533</td>
<td>0.560</td>
<td>0.516</td>
<td>0.144</td>
<td>0.133</td>
</tr>
<tr>
<td>6</td>
<td>Kandu</td>
<td>0.785</td>
<td>0.571</td>
<td>0.578</td>
<td>0.513</td>
<td>0.154</td>
<td>0.137</td>
</tr>
</tbody>
</table>

n=30, S: Significant, NS: Not significant, SD: Standard deviation, SEM: Standard error of mean

Table No IV. Intergroup comparison of objective parameter of *vataja abhishyanda* (Mann Whitney test)

<table>
<thead>
<tr>
<th>S. No</th>
<th>Symptoms</th>
<th>Mean of Group</th>
<th>SD of Group</th>
<th>SEM of Group</th>
<th>U</th>
<th>P</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Raga</td>
<td>1.133</td>
<td>0.866</td>
<td>0.915</td>
<td>0.743</td>
<td>0.236</td>
<td>0.191</td>
</tr>
</tbody>
</table>

n=30, S: Significant, NS: Not significant, SD: Standard deviation, SEM: Standard error of mean
Table No V. The % wise improvement of Signs and Symptoms in both groups

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Cardinal Symptoms</th>
<th>Result In Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Group-I</td>
</tr>
<tr>
<td>1</td>
<td>Nistoda</td>
<td>31.81%</td>
</tr>
<tr>
<td>2</td>
<td>Stambha</td>
<td>37.50%</td>
</tr>
<tr>
<td>3</td>
<td>Sangarsha</td>
<td>40%</td>
</tr>
<tr>
<td>4</td>
<td>Vishushkabhava</td>
<td>79.99%</td>
</tr>
<tr>
<td>5</td>
<td>Shishirashruta</td>
<td>54.13%</td>
</tr>
<tr>
<td>6</td>
<td>Kandu</td>
<td>41.38%</td>
</tr>
<tr>
<td>7</td>
<td>Raga</td>
<td>49.97%</td>
</tr>
</tbody>
</table>

Average Percentage of relief 47.82% 39.83%

Discussion

Vataja Abhisyanda can be correlated to simple allergic conjunctivitis based on the symptoms like Nistoda (Pricking Pain), Sangarsha (Foreign body sensation), Shishirashruta (Watering discharge/ Cold lacrimation), AlpaShopa (Mild Chemosis), Vishushkabhava (Feeling of dryness), Parushya (Dryness)[5].

In present study Raja and Dhuma Sevana (90.62% of the patients) are found to be predominant causes of Vataja Abhishyanda or simple allergic conjunctivitis. Burden of studies in young children, pollution (two wheeler riders) and field work may also be a cause in those patients exposed to outdoor atmosphere as 34.38% trial subjects were students, service class, business etc.

The gravity of this disease was very well depicted by our ancient Acharyas by considering it as a cause for all Netrarogas and same is seen if conjunctivitis is not treated in time can result into serious complication like keratitis, iritis, iridocyclitis, glaucoma, chorioretinitis, and retinal degeneration etc.

In present study shows that there was congestion in palpebral conjunctiva in 87% patients, 50% had Follicles, 25% had Papillae and 9.37%(3) had concretion. This shows that congestion, follicle and papilla and concretions are commonly seen in patients of simple allergic conjunctivitis in palpebral conjunctiva. The data also shows that there was congestion in bulbar conjunctiva in 78.12% patients, chemosis 6.25% which indicates congestion and chemosis are seen commonly in simple allergic conjunctivitis. The data shows that 93.75% patients were having Nistoda, 46.87 % were having Stambha, 100% were having Sangarsha, 43.75% were having Vishushkabhava, 100% were having Shishirashruta and 100% were having Kandu, 100% patients were having Raga hence Shishirashruta and Vishushkabhava are clinical features in Vataja Abhishyanda.

In Group A, relief in the symptom of Nistoda was observed in 15 patients with 31.81% of improvement which is Significant at the level of p value ≤0.05 and in Group B, relief in the symptom of Nistoda was observed in 15 patients with 51.99% improvement which is extremely significant at the level of p value ≤0.001. Relief in the symptom of Nistoda is better in group B than group A which was treated with Haritaki Vidalaka. Haritaki is Tridoshashamaka and Visheshata Vata Shamaka and after it is fried in ghee its Vatashamana property increases and hence the pain subsides which is the main symptoms of Vata. More ever the medicine which is applied in the form of Vidalaka greater and retention time hence better.
bioavailability which also shows better relief in symptoms of Nistoda than Bilvadi Aschyotana. Ushana Veerya and Madhura Vipaka of Haritaki Shows Vatashamaka effect and subsided the symptom of Nistoda. In Vidalaka the tissue contact time is more and is applied in closed eye so due to increase tissue contact time the symptoms of pain in eye was easily subsided the symptoms of Nistoda.

In Group A relief in the symptom of Stambha was 37.50% which is non significant at the level of p value >0.05.In Group B relief in the symptom of Stambha was 91.66% which is Significant at the level of p value ≤0.05.

In Group A, relief in the symptom of Sangarsha was 40% which is extremely significant at the level of p value ≤0.001. In Group B, relief in the symptom of Sangarsha was 20.69% which is significant at the level of p value ≤0.05. In Group A, relief in the symptom of Vishushkabhava was 79.99% which is Significant at the level of p value ≤0.05. In Group B, relief in the symptom of Vishushkabhava was observed 24.99% which is non significant at the level of p value >0.05. In Group A, relief in the symptom of Shishirashruta was observed 54.13% which is extremely significant at the level of p value ≤0.001. In Group B, relief in the symptom of Shishirashruta was observed 24.99% which is significant at the level of p value ≤0.01.

In Group A, relief in the symptom of Kandu was 41.38% which is extremely significant at the level of p value ≤0.001. In Group B, relief in the symptom of Kandu was observed in 25.80% which is significant at the level of p value ≤0.01. In Group A, relief in the symptom of Raga was 49.97% which is extremely significant at the level of p value ≤0.001. In Group B, relief in the symptom of Raga was 31.71% which is significant at the level of p value ≤0.01. Ragata is seen as a result of frequent rubbing which produces an inflammatory response vitiating the Pitta dosha and hence most of the medicines like Patala, Gambhari etc. have Tikta, Kashaya and Madhura rasa which pacify Pitta and Rakta and also promote healing action. Hence this drug has shown improvement in reducing conjunctival congestion, concretions and follicles in group A patients treated with Bilvadiyoga.

All the drugs in Bilvadi Yoga Aschyotana are Ushna Veerya hence possess Vata Shamaka property and as Vata is the main Dosha involved in the disease. All the drugs also possess Shothahara property which helps in subsiding features like Alpa-shopha (mild chemosis). The Vednasthapana property of the contents helps in relieving Nistoda (pricking pain). Laghu, Rukshaguna of the drugs helps in better penetration and bioavailability. Kashaya rasa promotes healing (Ropana) and reduces the discharges. Hence significant there was relief of the symptom Shishirashruta i.e. watery discharges. Tannins present in Bilva have astringent properties form complexes with macromolecules particularly with proteins (digestive and other enzymes, fungal or viral proteins). Tannin containing drugs will precipitate protein and have been used traditionally as styptics & used for the protection of inflamed surfaces. They also have a vasoconstrictor effect on small superficial vessels thus limiting fluid loss and preventing external aggregations and regeneration in case of superficial wounds or burns and tocopherol related compounds promote anti-oxidative activity at local site.

Haritaki has Pancharasa Vishesha Kashaya rasa and due to Kashaya Rasa promotes healing (Ropana) and reduces the discharges. So it is helpful in the relief of the symptom of Shishirashruta i.e. watery discharges. Ghritahas Madhura rasa which shows the Vatashamana effect. Ghrita have Varnya karma so it helps in Ropana in Abhishyanda. Haritaki has Ushna Veerya and does Vata Shamaka which is the main Dosha involve in the disease VatajaAbhishyanda. The Vednasthapana property of Haritaki helps in relieving Nistoda (pricking pain). Laghu, Rukshaguna of Haritaki helps in better penetration of the drug. Snigdha, Mridu Guna of Ghrita helps to reduce Stambha (Stiffness of lids) in Vataja Abhishyanda. Haritaki and Ghrita both have Madhura Vipaka shows Vata Shamka karma which is the main Dosha involved in the disease Vataja Abhishyanda. Haritakiand Ghrita both have Vatashamka Karma and Chakshushya property.

Conclusion

Bilvadi Yoga Aschyotana and Haritaki Vidalaka
formulation gave better results in the clinical features like Nistoda (Pain in eyes), Stambha (Stiffness in lids), Sangarsha (Foreign body sensation), Vishushkabhava (feeling of dryness), Shishirashruta (Cold lacrimation), Kandu (Itching), Raga (Congestion). No adverse effects were observed during the study in both of formulations viz Bilvadi Yoga Aschyotana and Haritaki Vidalaka.

Comparing the symptomatic improvement in both groups it was found that average percentage of relief was higher in ‘Group-A’ i.e. 47.82%, followed by ‘Group-B’ i.e. 39.83% which shows that effect of therapy was better in Group-A in comparison to Group-B. Hence Bilvadi Yoga Aschyotanas showed better results in comparison to Haritaki Vidalaka.

References

2. Sushruta, Sushruta Samhita with Nibandha Sañgraha commentary. Chowkamba Samskrita Samsthan; 2013. 6, 3:603
3. Sushruta, Sushruta Samhita with Nibandha Sañgraha commentary. Chowkamba Samskrita Samsthan; 2013. 6, 6:603