

A CLINICAL STUDY OF CHANDANADI PRALEPA & NIMB-LODHRA ASCHYOTAN IN THE MANAGEMENT OF PITTAJ ABHISHYANDA W.S.R. TO ACUTE MUCO-PURULENT CONJUNCTIVITIS

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ABSTRACT

Muco-Purulent conjunctivitis is a contagious disease of the conjunctiva. Furthermore, Acute Muco-Purulent Conjunctivitis is one of the types of bacterial conjunctivitis, which if remain untreated can cause corneal involvement leading to corneal ulceration and may leave a permanent opacity landing the patient with blindness. The established line of treatment includes topical eye drops (Antibacterial, Steroid) instillation along with systemic Anti biotic & Anti inflammatory drugs. However, overuse of these drugs lead to resistance, making them in effective. So the need of alternative medicines arises.

In Ayurvedic perspective, due to similarity in clinical features, the disease *Pittaj Abhishyanda* can be safely compared to Muco-Purulent conjunctivitis. Similarly, Vagbhat has given prime importance to '*Ashchyotan* therapy' (topical instillation) in all eye diseases (*netra-roga*). Hence, we decided to use & prove efficacy of '*Chandanadi Pralepa*' & '*Nimb-Lodhra Aschyotan*' (topical instillation) in the management of *Pittaj Abhishyanda* w.s.r. to Acute Muco-Purulent Conjunctivitis. The study has shown excellent results in reducing symptoms like *Netra daha* (burning of eyes), *Netra lalima* (congestion), *Kleda* (mucopurulent discharge), *Netra toda* (pain and foreign body sensation in eye) etc.

Keywords: Muco-Purulent conjunctivitis, *Pittaj Abhishyanda*, *Ashchyotan karm*

INTRODUCTION

Conjunctivitis is an inflammation of the conjunctiva (the outermost layer of the eye and the innermost layer of the eyelids), most commonly due to an allergic reaction or an infection (usually bacterial or viral). It is classified as infective and non infective conjunctivitis. Furthermore, mucopurulent conjunctivitis is the most common type of acute bacterial conjunctivitis characterized by marked conjunctival hyperemia and mucopurulent discharge from the eye. The established treatment includes topical Antibiotic instillation (eye drops), irrigation of con-

junctival sac with sterile warm saline along with systemic Anti-inflammatory and analgesic drugs.^[1,2] However, over use of these topical drugs may cause resistance & mucopurulent conjunctivitis can cause corneal involvement leading to corneal ulceration and may leave a permanent opacity landing the patient with blindness if not treated properly.

The disease *Pittaj Abhishyanda* can be compatible with muco-purulent conjunctivitis due to similarity in clinical features like burning of eyes, congestion of eyes, pain and foreign body sensation,

swelling of eye lids , mucopurulent discharge & photophobia etc.

Further, Sushruta has cautioned *Abhishyanda*, can be manifested as a result of contagious etiology and disease spread from one person to other person through air, close contacts etc. ^[3] The management of this condition is based on various measures in Ayurveda like *Aschyotana* (topical instillation), *Putpaka-Bidalaka* (External poultices) etc. carried out with the help of different medicinal plants according to demand with respect to the predominance of various etiological factors. ^[4, 5]

However, Vagbhat has given prime importance to '*Ashchyotan therapy*' (topical instillation) & advocated to do *Ashchyotan karm* in all *netra roga* (eye diseases). ^[6]

Hence, we decided to study the safety and efficacy of '*Chandanadi Pralepa*' & '*Nimb-Lodhra*' *Aschyotan* (topical instillation) having *Shothhar* (Anti inflammatory) and *Pittaghna* (*Pitta* pacifying) properties, in the management of *Pittaj Abhishyanda* w.s.r. to Acute muco-purulent conjunctivitis. The study showed excellent result in reducing symptoms like *Netra daha* (burning of eyes), *Netra lalima* (congestion), *Netra shopha* (swelling of eye lids), *Prakash asahatva* (photophobia), *Kleda* (mucopurulent discharge), *Netra toda* (pain and foreign body sensation in eye) etc.

Aim & Objective of the study:

Aim: To study the safety & efficacy of '*Chandanadi Pralepa*' & '*Nimb-Lodhra*' *Aschyotan* in *Pittaj Abhishyanda* w.s.r. to mucopurulent conjunctivitis.

Objectives:

1. To review the ancient literature on *Pittaj Abhishyanda*.
2. To develop evidence based support for the effects of *Chandanadi pralepa* and *Nimba Lodhra Aschyotan*

as mentioned in our ancient literature.

3. To provide simple and effective treatment for *Pittaj abhishyanda*.

Materials & Methods:

Title of Study: To study the safety & efficacy of '*Chandanadi Pralepa*' & '*Nimb-Lodhra*' *Aschyotan* in *Pittaj Abhishyanda* w.s.r. to mucopurulent conjunctivitis.

Type of Study: Open, Randomized, Non comparative Prospective study

Place of Study: M.A.Podar Government (Ayurved) Hospital, Worli, Mumbai, India

Subject recruitment: Patients selected from *Shalakyta Tantra* (Ophthalmology & ENT) O.P.D.

Total no. of patients: 30

Criteria for selection of patients: Patients were diagnosed clinically on the basis of symptoms described in classical and modern text.

Inclusion Criteria

1. Age group: 18 to 50 years.
2. Irrespective of sex.
3. The patients presenting signs and symptoms of *Pittaj Abhishyanda* (muco purulent conjunctivitis).

Exclusion Criteria

1. Patients who need surgical and other intervention.
2. Patients suffering from trachoma, dacrocystitis & subconjunctival hemorrhage.
3. Patients suffering from HIV & Bleeding disorder.
4. Patients not willing for trial.

Materials:

Drug Information:

- 1] *Chandanadi Pralepa*- Contents: 1) *Chandan- Pterocarpus santalinus*
- 2) *Yashtimadhu* – *Glyccirhyza glabra*
- 3) *Lodhra* – *Symplocos racemosus*
- 4) *Gairik* - Ochre

5) *Jatipushpa – Jasminum grandiflorum*
2] *Nimba-Lodhra Aschyotan*-^{17]}

Contents – 1) *Lodhra – Symplocos racemosus Roxb*

2) *Nimba – Azadiracta indica.*

Method of preparation:

1) *Chandanadi pralepa- Choorna* (fine powder)of *Chandan, Yashtimadhu, Lodhra, Jatipushpa, Gairik* was taken in *sama pramana* (Equal quantity). Total 5gm of *churna* was taken & 7ml of water was added to make a thick paste.

2) '*Nimb-Lodhra Ashchyotan*' - 50gm *Lodhra twak* (bark) and 50gm *Nimba* leaves crushed with 100ml water and made into the paste. Then the paste was heated a bit and made warm, then the mixture was taken in a clean cloth and

squeezed, the drops obtained were used for *Aschyotan karm* (topical instillation).

Methodology:

The study of this project is totally based on the clinical examination (subjective and objective), patient's narrations.

Total 30 patients of Acute mucopurulent conjunctivitis fulfilling the inclusion criteria will be selected.

The study was completed in total 30 patients were examined by randomized trial

30 patients of *Pittaj Abhishyanda* (Acute mucopurulent conjunctivitis) were included in this group. These patients have received treatment as follows –

Drug	Contents	Dose	Method administration	of Duration
1. <i>Chandanadi Pralepa</i>	<i>Chandan, Yashtimadhu</i>	<i>Madhyama</i> i.e.	<i>Bahya (pakshma vivarjit)</i>	<i>Neratlepa</i> 10 days.
2. <i>Nimba-Lodhra Aschyotan</i>	<i>Lodhra Gairik Jatipushpa Nimba Lodhra</i>	<i>1/3rd Angula</i> 12 drops <i>Ropan</i>	<i>From the distance of 2 Angula at Kaninika Sandhi</i> (medial canthus)	10 Days

Table 1: Table showing trail drug profile, dose, duration and methodology used.

Parameters for clinical assessment:

The result has been assessed in regard to clinical sign & symptoms.

Clinical Assessment

Following chief complaints were asked & then considered for the study.

1. *Netra daha* (burning of eyes)
2. *Netra lalima* (congestion)
3. *Shisirabhinanda*
4. *Netra shopha* (eye lid swelling)
5. *Kleda* (mucopurulent discharge)
6. *Prakash asahatwa* (photophobia)
7. *Kriccha unmilan* (difficulty in functioning of eyelids)
8. *Netra toda* (pain and foreign body sensation in eye)

9. *Ashru bahulya* (excessive lacrimation)
10. *Vartma shyavata*

Subjective and Objective Parameters

The study of the subject was totally based on the clinical ophthalmological examinations and the patient narration.

Subjective: It includes the following symptoms

1. *Netra daha*
2. *Shishirabhinanda*
3. *Kleda*
4. *Prakash asahtwa*
5. *Kriccha unmilan*
6. *Netra toda*

Objective: It includes the following symptoms

- 1) *Netra Sopha*

2) *Netra Lalima*

3) *Vartma shyavata*

Assessment of subjective criteria:

Assessment of subjective criteria has been done with the help of the following gradation scale:-

1. *Netra daha*:(Burning sensation)

0 –Absent

1 – Mild (one to two episodes per day)

2 – moderate (present intermittently throughout the day)

3 – Severe (present throughout the day)

2. *Shishirabhinanda* :

0 –Absent

1 – Mild (present at day time only)

2- Moderate (present at day and evening)

3- Severe(present throughout day and night time)

3. *Kleda*: (mucopurulent Discharge)

0 -Absent

1-Mild (*Strava* during day time)

2-Moderate (*Strava* during day & evening)

3- Severe (*strava* throughout day and night time.)

4. *Prakash asahatwa*

0 – Absent

1 – Mild (Present during day time)

2 – Moderate (during day & evening)

3 – Severe (throughout day & night)

5. *Kriccha unmilan* (difficulty in functioning of eye lids)

0 - Absent

1 – Mild (present during morning time)

2 – Moderate (Present during day i.e. morning & evening time)

3 –Severe (Present throughout day & night time)

6. *Netra Toda* (Pain and Foreign body sensation)

0 – Absent

1 – Mild during morning time)

2 – Moderate (during morning and evening)

3 – Severe(throughout the day & night)

7. *Ashru Bahulya*

0 – Absent

1 – Mild (present during morning time)

2 – Moderate (present during morning and evening)

3 – Severe (present throughout day & night)

Assessment of objective criteria:

1. *Netra shopha*

0 –Absent

1 – Mild (restricted to upper or lower eyelid)

2 – Moderate (restricted to both eye lids)

3 – Severe (involving both eye lid and palpebral conjunctiva)

2. *Netra Lalima*

0 –Absent

1- Mild (restricted to palpebral conjunctiva)

2 - Moderate (restricted to palpebral & bulbar conjunctiva)

3- Severe (involving palpebral,bulbar & fornix conjunctiva)

3. *Vartma Shyavata*

0 - Absent

1 – Mild (*vartma shyavta* to upper lid or lower lid)

2 – Moderate (*vartma shyavata* to one lid and partially to other lid)

3 – Severe (*vartma shyavata* of both lids)

Results were drawn from overall statistical analysis.

The obtained results will be measured according to the following grades:

Total relief : 100%

Excellent relief : 80% - 100%

Good relief : 60% - 80%

Moderate relief : 40% - 60%

Mild relief : 20% - 40%

Not significant : 0% - 20%

OBSERVATION:-

1) Distribution of the patients by Age

Patients of the age ranging from 18-50 years were selected for this trial.

out of these 4 patients [13.33%] were from the age group of 18-20 yrs. 11 patients [36.66%] were from the age group of 21-30 yrs. 8 patients [26.66%] were from the age group of 31-40 yrs. 07 patients [23.33%] were from the age group of 41-50 yrs.

2) **Distribution of the patients by Sex** : Patients data shows there were 73.33% patients were male & 26.66% of patients were female.

3) **Distribution of the patients by Religion:** The majority of the patients i.e.80% were found to be of Hindu community followed by Muslims (13.33%) community and sikh (6.66%).

4) **Distribution of the patients by Socio-economic status:** It reveals that 3.33% of patients were from upperclass and 80% of patients were from middle class & 10% of patients were from lower class.

5) **Distribution of the patients by Occupation status** : It shows that 26.66% of patients were service man, 6.66% were teachers, 36.66% of patients were students, 16.66% of patients were house-wife, and 13.33 of patients were businessman.

6) **Distribution of the patients by Food habits:** The data also describes dietary pattern wise distribution which indicates that 23.33% of pts were vegetarian while 76.66% of pts were acclimatized to mixed diet

7) **Distribution of the patients by habitats** : The study shows among

30 patients of study 24(80%) were residing in urban area while, 06(20%) were residing in rural area.

8) **Distribution of the patients by Prakriti wise** : All the patients of this study were having Dwandaja Prakriti. 46.66% were having Vata-pittaja and 26.66% were having Kapha-Vataja Prakriti and 20 % were having Pitta-Vataja Prakriti 6.66%were having Pitta-Kaphaja prakriti.

9) **Incidences of Symptoms in Patients:** Among 30 patients of abhishyanda 30 (100%)of patients had Netra Daha, 30 (100%)of patients had Netra Lalima, 30 (100%)of patients had Sishirabhinanda, 27 (90%)of patient had **Netra Sopha**, 30 (100%)patients had *kleda strava*, 24(80%) of had Prakash Ashatva, 30 (100%)patients had Kriccha Unmilan, 27 (90%)of patient had Netra Toda, 30 (100%)patients had Ashru Bhaulya, 21(70%)of patient had Vartma Shyavata.

10) Effect of therapy on symptoms:

1) **Netra Daha** : Sum of all signed ranks was 465. The number of pairs were 30. Z value was 4.78 , which was statistically very highly significant, $P<0.0001$

2) **Netra Lalima** : Sum of all signed ranks was 465. The number of pairs were 30. Z value was 4.78 , which was statistically very highly significant, $P<0.0001$

3) **Sishirabhinanda** : Sum of all signed ranks was 465. The number of pairs were 30. Z value was 4.78 , which was statistically very highly significant, $P<0.0001$

4) **Netra Sopha** : Sum of all signed ranks was 190. The number of pairs were 19. Z value was 9.356 , which was statistically very highly significant, P<0.0001

5) **Kleda**: Sum of all signed ranks was 465. The number of pairs were 30. Z value was 4.78, which was statistically very highly significant, P<0.0001

6) **Prakash Ashatva** : Sum of all signed ranks was 15. The number of pairs were 05. Z value was 2.02 , which was statistically insignificant, P=0.0625

7) **Kriccha unmilan** : Sum of all signed ranks was 136. The number of pairs were 16. Z value was 3.516 , which was

(Wilcoxon match paired sign rank test)

statistically very highly significant, P<0.0001

8) **Netra Toda** : Sum of all signed ranks was 276. The number of pairs were 23. Z value was 4.19 , which was statistically very highly significant, P<0.0001

9) **Ashru Bhaulya** : Sum of all signed ranks was 15. The number of pairs were 05. Z value was 2.02 , which was statistically insignificant, P=0.0625

10) **Vartma shyavata** : Sum of all signed ranks was 15. The number of pairs were 05. Z value was 2.02 , which was statistically insignificant, P=0.0625

Symptoms	Mean	S.D	S.E	W	N	Z	P
Netra Daha							
BT	2.533	0.5074	0.09264	465	30	4.78	<0.0001
AT	0.1667	0.3790					
Diff	2.367	0.6149					
Netra Lalima							
BT	2.533	0.5713	0.1043	465	30	4.78	<0.0001
AT	0.2333	0.4302	0.07854				
Diff	2.300	0.7944	0.1450				
Sishirabhinada							
BT	2.533	0.5074	0.09264	465	30	4.78	<0.0001
AT	0.1667	0.3790	0.06920				
Diff	2.367	0.6149	0.1123				
Netra Shopha							
BT	1.733	0.7849	0.1433	190	19	9.36	<0.0001
AT	1.067	0.7397	0.1350				
Diff	0.6667	0.5467	0.09981				
Kleda							
BT	2.500	0.5085	0.09285	465	30	4.78	<0.0001
AT	0.5333	0.6814	0.1244				
Diff	1.967	0.6687	0.1221				
Prakash Ashatva							
BT	0.9667	0.8000	0.6149	15.000			
AT	0.1667	0.6103	0.1114				
Diff		0.3790	0.06920		05	2.02	0.0625
Kriccha Unmilan							
BT							
AT	2.000	0.5252	0.09589	136	16	3.12	<0.0001

Diff	1.333	0.5467	0.09981				
	0.6667	0.7112	0.1298				
Netra Toda							
BT	2.100	0.9595	0.1752	276	23	4.19	<0.0001
AT	0.7667	0.6789	0.1240				
Diff	1.333	1.028	0.1877				
Ashru Bhaulya							
BT	1.367	0.4901	0.08949	15.000	5	2.02	0.0625
AT	1.200	0.6103	0.1114				
Diff	0.1667	0.3790	0.06920				
Vartma Shyvata							
BT	1.333						
AT	1.167	1.028	0.1877	15.000	5	2.02	0.0625
Diff	0.1667	0.9499	0.1734				
		0.3790	0.06920				

Table 2: Table showing effect of therapy on symptoms

11) Table showing overall percentage of improvement/Relief in Patients

Among 30 patients, 01(3.33%) of patient had excellent relief, 19(63.33%) of patient had good relief, 10(33.33%) of patient had moderate relief.

Overall improvement	NO.OF.PATIENTS	PERCENTAGE %
Total relief	00	00%
Excellent relief	01	3.33%
Good relief	19	63.33 %
Moderate relief	10	33.33%
Mild relief	00	00%
Not significant	00	00 %

Table 3: Table showing overall percentage of improvement/Relief in Patients

RESULT:

Chief complaints:

Among 30 patients of *Abhishyanda* 30 (100%)of patients had *Netra Daha*, 30 (100%)of patients had *Netra Lalima*, 30 (100%)of patients had *Sishirabhinanda*, 27 (90%)of patient had *Netra Shopha*, 30 (100%)patients had *Kleda strava*, 24(80%) of had *Prakash Ashatva*, 30 (100%)patients had *Kriccha Unmilan*, 27 (90%)of patient had *Netra Toda*, 30 (100%)patients had *Ashru Bhaulya* and 21(70%)of patient had *Vartma Shyvata*.

Effect of Therapy:-

1) 93.42% relief was found in *Netra Daha* (burning of eyes) Statistically it is significant.

2) 92.10% relief was found in *Netra Lalima* (congestion). It is statistically significant.

3) 93.42% relief was found in *Sishirabhinanda*. It is statistically significant.

4) 38.46% relief was found in *Netra Shopha* (eye lid swelling). It is statistically significant.

5) 78.66% of relief was found *Kleda stravaa* (mucopurulent discharge). It is statistically significant.

6) 17.24% relief was found in *Prakash Ashatva* (photophobia) statistically it is significant.

7) 33.33% relief was found in *Kriccha Unmilan* (difficulty in functioning of eyelids). It is statistically significant.

8) 63.49% relief was found in *Netra Toda* (pain and foreign body sensation in eye). It is statistically significant.

9) 12.19% relief was found in *Ashru Bahulya* (excessive lacrimation). It is statistically insignificant.

10) 12.50% relief was found in *Vartma Shyavata*. It is statistically Insignificant.

11) 62.07% of total relief was obtained

DISCUSSION:

Probable Mode of Action of Drugs:

The mechanism of action of any drug mainly depends upon its properties as well as its molecular structure and other associated factors. For explaining the drug action on a particular disease, we should have a thorough knowledge about *Samprapti* and pathogenesis of the disease along with the physiology of that particular organ or system. The *Samprapti* of *Pittaj Abhishyanda* which is available in our text is used for explaining the mechanism of drug action. The mode of action of the drugs under trial can be understood on the basis of inherent properties of the drugs.

The drug having *Tikta, Kaşaya- Rasa, Laghu, Rukşā- Guṇas* and *Katu Vipaka* is having *Kaphahara*. *Slesmopasosana* properties are possessed by *Tikta Rasa*. *Kashaya Rasa* shows its *Shoshana*, more particularly *Kleda Shoshana* and *Sleshma Prasamana* properties. The drugs having *Madhura Vipaka* possess *Rasayana, Chakshushya, Jivaniya, Balya* properties. Because of its *Rasayana* action the substrate *Dhatus*, vitiated *Dhatu* as well as cornea are nourished, thus by improving the functional capacity of the eye, there is declined in various symptoms. *Madhura Rasa* and *Madhura Vipaka* also pacifying the *Pitta Dosha*, which is the most important factor re-

sponsible for this disorders. *Shita Virya* has *Pitta shamana, Rasayana, Chakshushya* and *Pittanashaka* effect and simultaneously *Shita Virya* helps in maintaining the *Shita Satmya* of the *Drishti* which is a therapeutic property of the *Drishti*. Because of the above said inherent properties of the drugs, drugs like *Nimb, Chandan & Yashtimadhu* cleanses *Srotasa* (channel), thus allowed free movement of *Vata, Pitta* and *Kapha* and then results into *Kapha-Pitta Shamana*. This *Pitta*, after *shaman* performs its normal functions of visual perception.

CONCLUSIONS

At this particular juncture the fruitful conclusions which have automatically emerged through the discussion of the available concepts and obtained data are being presented below:

1. In Ayurvedic literature, *Acharyas* have explained the diseases of eye with minute details. Disorders, which result into the vitiation of *Doshas* can leads to partial or complete loss of vision if not treated properly at proper time have been described under the *sarvagat netra rogas*.

2. *Pittaj Abhishyanda* is amongst one of the 17 *Sarvagat netra rogas*, which is produced mainly due to vitiation of *Pitta Dosha*.

3. The disease *Pittaj Abhishyanda* can be safely compared to mucopurulent conjunctivitis.

4. Mucopurulent conjunctivitis is a contagious disease of the conjunctiva.

5. Maximum numbers of conjunctivitis patients attend OPD of Shalakyā Dept. were of *Pittaj Abhishyanda* i.e of mucopurulent conjunctivitis. Diagnosis was made on the basis of Signs and Symptoms as per the literature and was confirmed by slit lamp examination.

Total effect of therapy:

Among 30 patients, 01(3.33%) of patient had excellent relief, 19(63.33%) of patient had good relief, 10(33.33%) of patient had moderate relief..

In nut cell we can say that,

1. Due to similarity in clinical features disease *Pittaj Abhishyanda* can be compared to mucopurulent conjunctivitis

2. '*Chandanadi Pralepa*' & '*Nimb-Lodhra Aschyotan*' has shown good results in most of *Pittaj Abhishyanda* like-

1. *Netra daha* (burning of eyes)

2. *Netra lalima* (congestion)

3. *Shisirabhinanda*

4. *Netra shopha* (eye lid swelling)

5. *Kleda* (mucopurulent discharge)

6. *Prakash asahatwa* (photophobia)

7. *Kriccha unmilan* (difficulty in functioning of eyelids)

8. *Netra toda* (pain and foreign body sensation in eye)

9. *Ashru bahulya* (excessive lacrimation)

10. *Vartma shyavata*

Scope for further study

Effect of '*Chandanadi Pralepa*' & '*Nimb-Lodhra Aschyotan*' without any oral medication has shown better results effect in *Pittaj Abhishyanda* w.s.r. to mucopurulent conjunctivitis.

If administered with oral medication and with *pathyakaraka aahara vihaar* might give still better results. However as the sample size was small the obtained results can't be generalized.

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