



## Research Article

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### A COMPARATIVE STUDY TO EVALUATE THE EFFICACY OF MANASHILADI VIDALAKA AND NIMBADI PINDI IN ANJANANAMIKA (EXTERNAL HORDEOLUM)

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#### ABSTRACT

Anjananamika is a Raktapradhana Vartmagata Vikara caused by the vitiation of Rakta and Mamsa of Vartma due to improper Ahara and Viharas. It can be correlated to External hordeolum, acute suppurative inflammation of the eyelash follicles. Being a Raktapradhana Vyadhi along with the involvement of other Doshas, Pittahara and Doshahara treatment can be done. All the drugs in Manashiladi Vidalaka and Nimbadi Pindi are Chakshushya and have Pitta shamaka properties. Here a sincere effort is made to evaluate the effect of Manashiladi Vidalaka and Nimbadi Pindi in Anjananamika. The study was conducted in 40 subjects. Clinical symptoms were noted and documented at baseline, 3<sup>rd</sup> day, 5<sup>th</sup> day, 10<sup>th</sup> day and 15<sup>th</sup> day. Observations were analyzed and evaluated using statistical methods. This study showed that both Manashiladi Vidalaka and Nimbadi Pindi have significant effect in Anjananamika. There is no significant difference in the effect of Manashiladi Vidalaka and Nimbadi Pindi in Anjananamika.

**Keywords:** Anjananamika, External Hordeolum, Kriyakalpa, Pindi, Vidalaka

#### INTRODUCTION

According to Ayurveda, Anjananamika is a Raktapradhana Sadhya Vartmagata Netra vikara caused by the vitiated Doshas present in the Rakta and Mamsa of the Vartma mainly due to improper Ahara and Viharas.<sup>1</sup> It can be compared to as External hordeolum or Stye, acute suppurative inflammation of the eyelash follicle more common in children and young adults.<sup>2</sup> The causative organism responsible for Stye is *Staphylococcus aureus*.<sup>3</sup>

The exact worldwide incidence of External hordeolum is unknown. In India more than one million cases of Stye is reported per year. Every age and demographic is affected by this condition. There are no differences in prevalence among the populations worldwide. These contribute to a major cause of refractive errors. The Ayurvedic intervention of Anjananamika includes Swedana, Nishpeedana, Bhedana, Pratisarana and Jaloukavacharana.<sup>4,5</sup>

In modern, it is treated with anti-inflammatory drugs, oral and topical antibiotics<sup>6</sup> which have many side effects. These topical antibiotics and ointments that are used cause temporary stinging, burning sensation, swelling and irritation to the eyes. Moreover, these drugs should be used frequently at a gap of 1-2 hours which may not be convenient for the student's group and working class also takes its own time to act and give results. Its prolonged use can cause dryness and irritation to the eyes.

Considering the prevalence of the disease and the effects of the topical antibiotics and ointments, an attempt is made to evaluate the effect of Manashiladi Vidalaka<sup>7</sup> and Nimbadi Pindi<sup>8</sup> in Anjananamika.

#### MATERIALS AND METHODS

##### Objectives of the Study

1. To evaluate the efficacy of Manashiladi Vidalaka in Anjananamika.
2. To evaluate the efficacy of Nimbadi Pindi in Anjananamika.
3. To compare the efficacy of Manashiladi Vidalaka and Nimbadi Pindi in Anjananamika.

##### Source of Data

##### Sample Source

Alva's Ayurveda Medical College and Hospital, Moodbidri, Dakshina Kannada, India. The patients were randomly selected from the OPD and IPD of Shalaky Tantra Department after obtaining permission from IEC with protocol number ICEC/SHKT/02 and the trial was carried out as per Declaration of Helsinki Guidelines.

##### Drug Source

Drugs required were identified and collected from the source of availability. Medicines were prepared according to classical references at Rasa Shastra and Bhaishajya Kalpana lab, Alva's Ayurveda Medical College and Hospital.

##### Method of Sampling

Lottery Method, the patients diagnosed with Anjananamika were randomly allocated into two groups A and B.

**Criteria for Selection of Patients**

**Diagnostic Criteria**

Patients presenting with the Lakshanas of Anjananamika like-

- Pitaka (eruption)
- Daha (burning sensation)
- Kandu (itching)
- Toda (pricking pain)
- Sthira (immovable)
- Tamra varna (coppered colour)

**Inclusion Criteria**

- Patients fulfilling the diagnostic criteria.
- Patients from 6 - 60 years of age irrespective of sex.

**Exclusion Criteria**

- Patients with systemic diseases.

**Intervention**

**Table 1: Intervention of two groups**

Groups	Group A	Group B
Drug	Manashiladi Vidalaka	Nimbadi Pindi
Mode of Administration	Vidalaka	Pindi
Duration	Once daily for 5 days	Once daily for 5 days
Dose	Quantity sufficient	Quantity sufficient

**Observation Period**

Patients were assessed with clinical parameters at baseline, 3<sup>rd</sup> and 5<sup>th</sup> day. Follow up was done on 10<sup>th</sup> and 15<sup>th</sup> day. Total duration of the study was 15 days.

**Assessment Criteria**

**Subjective Parameters**

- Daha (burning sensation)
- Toda (pain)
- Kandu (itching)

**Objective Parameters**

- Swelling
- Tenderness

- Patients with refractive errors.
- Patients with structural and functional deformity of eyes.

**Study Design:** Single Blind Randomized Comparative Clinical Study.

**Method of Preparation of Medicine**

**Ingredients**

Manashiladi Vidalaka contains Manashila, Ela, Nata, Saindhava and Madhu. Nimbadi Pindi contains Nimba Patra and Lodhra.

**Preparation**

Shodhana of Manashila was done by doing Bhavana in Aadraka Swarasa for 7 times.

Choorna was made by mixing equal quantity of each drug after powdering and filtering through a Kora cloth.

- Redness

**RESULTS**

40 patients registered for the study were randomly allocated to two groups A and B with 20 patients each. Group A was given Manashiladi Vidalaka and Group B was given Nimbadi Pindi. Summary statistics have been interpreted for Standard deviation, Standard error; Mean deviation, Mean, t-value, p-value. Test of significance was applied for comparing the results within the group by using paired t-test and between the groups by unpaired t-test. Clinical parameters that were assessed were Daha, Toda, Kandu, Swelling, Tenderness and Redness. Individual effect of both the groups was compared on baseline, 3<sup>rd</sup> day, after treatment and on follow up.

**Table 2: Analysis of both groups during treatment, after treatment and on follow up**

Parameters	Group	Before Treatment	During Treatment	Mean Deviation	%	Standard Deviation	Standard Error	t value	p value
Daha	A	1.4	DT	1.35	68.1	0.39	0.088	0.567	= 0.577
			AT	0.65	100	0.550	0.123	6.097	< 0.001
			F <sub>1</sub>	0	100	1.4	0.234	5.984	< 0.001
			F <sub>2</sub>	0	100	1.4	0.234	5.984	< 0.001
	B	1.3	DT	0.85	35	0.686	0.153	2.373	= 0.009
			AT	0.30	77	0.759	0.178	5.017	< 0.001
			F <sub>1</sub>	0	100	0.923	0.216	0.206	< 0.001
			F <sub>2</sub>	0	100	0.923	0.216	0.206	< 0.001
Toda	A	1.8	DT	1.55	13.8	0.441	0.09	2.517	= 0.021
			AT	0.75	58.8	0.605	0.135	7.764	< 0.001
			F <sub>1</sub>	0	100	0.768	0.172	10.48	< 0.001
			F <sub>2</sub>	0	100	0.768	0.172	10.48	< 0.001
			DT	0.95	29	0.681	0.152	2.62	= 0.017
			AT	0.75	44	0.754	0.169	3.55	= 0.002

	B	1.35	F <sub>1</sub>	0	100	1.04	0.233	5.80	< 0.001
			F <sub>2</sub>	0	100	1.04	0.233	5.80	< 0.001
Kandu	A	1.6	DT	1.3	18.6	0.571	0.128	2.34	= 0.030
			AT	0.7	56.3	0.553	0.124	7.285	< 0.001
			F <sub>1</sub>	0	100	0.598	0.134	11.96	< 0.001
	B	1.35	F <sub>2</sub>	0	100	0.598	0.134	11.96	< 0.001
			DT	0.65	51.8	0.657	0.147	4.33	< 0.001
			AT	0.30	77.7	0.605	0.135	7.764	< 0.001
Swelling	A	1.85	F <sub>1</sub>	0	100	0.813	0.182	7.429	< 0.001
			F <sub>2</sub>	0	100	0.813	0.182	7.429	< 0.001
			DT	1.75	5.4	0.308	0.068	1.453	= 0.163
	B	1.85	AT	1.05	43.2	0.523	0.117	6.839	< 0.001
			F <sub>1</sub>	0	100	0.933	0.209	8.865	< 0.001
			F <sub>2</sub>	0	100	0.933	0.209	8.865	< 0.001
Tenderness	A	1.85	DT	1.3	29.7	0.759	0.170	3.240	= 0.004
			AT	0.75	59.4	0.718	0.161	6.850	< 0.001
			F <sub>1</sub>	0	100	0.813	0.182	10.18	< 0.001
	B	1.65	F <sub>2</sub>	0	100	0.813	0.182	10.18	< 0.001
			DT	1.55	16.2	0.571	0.128	2.34	= 0.30
			AT	0.85	54	0.562	0.126	7.95	< 0.001
Redness	A	1.45	F <sub>1</sub>	0	100	0.813	0.182	10.18	< 0.001
			F <sub>2</sub>	0	100	0.813	0.182	10.18	< 0.001
			DT	1.25	13.7	0.410	0.091	2.179	= 0.042
	B	1.1	AT	0.45	68.9	0.649	0.145	6.89	< 0.001
			F <sub>1</sub>	0	100	0.605	0.135	10.7	< 0.001
			F <sub>2</sub>	0	100	0.605	0.135	10.72	< 0.001
Redness	A	1.45	DT	0.75	31.8	0.489	0.109	3.199	= 0.005
			AT	0.30	72.7	0.410	0.091	8.718	< 0.001
			F <sub>1</sub>	0	100	0.614	0.143	9.678	< 0.001
	B	1.1	F <sub>2</sub>	0	100	0.614	0.143	9.678	< 0.001

Abbreviations: DT - During Treatment, AT - After Treatment, F<sub>1</sub> - Follow Up 1, F<sub>2</sub> - Follow Up 2

### Comparative effect of both groups after 5<sup>th</sup> day of treatment

Table 3: Comparison of Group A and Group B after 5<sup>th</sup> day of treatment

Symptoms	Mean		Mean Deviation	t value	p value
	Group A	Group B			
Daha	0.65	0.30	0.35	1.911	p = 0.064
Toda	0.75	0.75	0	0.00	p = 1.00
Kandu	0.70	0.30	0.40	2.005	p = 0.047
Swelling	1.05	0.75	0.30	1.352	p = 0.1.84
Tenderness	0.85	0.75	0.10	0.566	p = 0.582
Redness	0.45	0.55	0.10	0.489	p = 0.628

## DISCUSSION

### Observations

#### Age

40% of the patients were from the age group 16- 20 years. This may be because the disease is more common in children and young adults. This age group is more prone to use of mobile phones, computers and eye strain which causes imbalance to eye muscles.

#### Dietary Habits

72.5 % patients were having mixed dietary habits. This may be due to the usage of more oily, fried and cold foodstuffs as well as unwholesome food intake by the patients of mixed diet, leading to Vata- Kapha Prakopa. Intake of low nutritious diet can also be the cause for the occurrence of the disease.

### Occupation

72.5 % were students, may be because of the prevalence of the disease in children and young adults, this group is more prone to eyestrain, lack of sleep and intake of junk foods. Improper nutrition and faulty food habits also owe to be a major factor.

### Nidanas

#### Ahara

Intake of Abhishyandi, Lavana, Guru, Ushna, Amla, Guru, Snigdha and Tikshna Ahara was seen. Amla and Katu Rasa cause harm to the eyes by aggravating Vata and Pitta Dosha. Excessive intake of Ushna, Tikshna Aharas causes vitiation of Pitta Dosha leading to Netra Vikaras.

#### Vihara

Swapna Viparyaya Divaswapa and Ratri jagarana cause vitiation of Kapha and Vata respectively, which leads to impairment of

Jataragni. Doorekshana and Sukshma Nireekshna causes strain to the ciliary muscles that alter the accommodative power of the lens.

#### Mode of Action of Drug

##### Manashiladi Vidalaka

The Katu and Tikta Rasa of Manashila and Nata helps in alleviating Kapha and Pitta Dosha, acts as Lekhana, Krimihara, Dahaprashamana and Kanduhara. Ela has Kapha- Vatahara, Ropana, Sheeta Veerya, Pitta Shamana and Daha Shamana properties. Saindhava has Lavana Madhura Rasa, Laghu, Snigdha Guna, Sheeta Veerya, Sukshma Guna and Shoola Prashamana properties. Madhu has the properties of Chakshushya, Rakta shodhaka, Kaphaghna and Krimighna Shodhana and Vishaghna. Laghu, Ruksha Guna helps in Kaphavata Shamana. Yogvahi and Sukshma Marganusari property helps in entering the minute channels of the eye.

##### Nimbadi Pindi

Nimba is Chakshushya, Krimihara, Kandughna and Rakta Shodhaka. Pitta Shamana occurs due to its Tikta, Kashaya Rasa, Laghu, Ruksha Guna and Sheeta Veerya. Lodhra have Tikta, Kashaya Rasa, Laghu, Ruksha Guna and Sheeta Veerya, it does Pitta Shamana. It also has Chakshushya, Shothahara and Shleshma hara properties.

#### Procedure

The medicines applied are absorbed trans-cutaneously and since the contact time and bioavailability of the drugs is more, the absorption rate will be more. Since the thickness of the lids is less and no fat is present, there will be increased absorption. The absorbed medicine reaches the subcutaneous tissue through the follicles of the eye and reduces the local temperature, inflammation; replenish the glands of the eyelids, increased vasodilatation and drainage helps in the elimination of toxins from the site of lesion.

#### CONCLUSION

Within the group analysis shows that both the groups have highly significant results i.e. progressive decrease in symptoms. The comparative analysis between the groups showed no significant results except for Kandū. Both Manashiladi Vidalaka and Nimbadi Pindi are effective formulations giving good results in

the management of Anjananamika due to the Kaphapitta Shamana properties of the drugs. Hence Manashiladi Vidalaka and Nimbadi Pindi have proved effective in the management of Anjananamika (External Hordeolum).

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