

A Study on the Effect of Mahaushadhadi Anjanam in Pishtakam

Research Article

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Abstract

Pishtakam is a disease occurring in the white portion of the eye. It is manifested as a dense white eruption, or as a nodule resembling a water drop. It is a *Kapha* predominant condition treatable by medical intervention. Pinguecula is a condition resembling *Pishtakam*. It is an extremely common degenerative condition of the conjunctiva which is characterized by formation of a yellowish white nodule on the bulbar conjunctiva near the limbus. In this study *Anjanam* which is a medical intervention and a localized *Kapha sodhana* procedure was taken as the intervention of choice. It was planned to compare the result between *Mahaushadhadi Anjanam* in Group A study group and *Jateemukuladi Anjanam* in Group B control group. Mean change in vertical diameter of *Pishtakam* before treatment and 2 months after treatment in study group was 0.9025 and for control group it was 0.2450. Mean change in horizontal diameter of *Pishtakam* before treatment and 2 months after treatment in study group was 0.5325 and for control group it was 0.1900. No adverse drug reaction was found during whole study. Total 40 patients were registered and from the results and observations it could be concluded that both drugs were effective and the study drug proved to be more significant in comparison to the control drug ($p < 0.001$).

Keywords: *Jateemukuladi Anjanam, Mahaushadhadi Anjanam, Pishtakam, Pinguecula.*

Introduction

Among numerous diseases mentioned by Ayurveda *Acharyas* relating eye, *Pishtakam* is one among them affecting the *Suklamandala* (white portion) of the eye. It is manifested as a dense white eruption, or as a nodule resembling a water drop (1). Based on the clinical features *Pishtakam* can be correlated to Pinguecula. It is an extremely common, innocuous degenerative condition of the conjunctiva. It is characterized by formation of a yellowish white patch on the bulbar conjunctiva near the limbus. It is commonly seen in outdoor workers and in elderly people. The prevalence of Pinguecula in South Indian population is 11.3 % (2). The complications of Pinguecula include inflammation, intra epithelial abscess formation and conversion to Pterygium. It may affect the person's vision by creating astigmatism. It may become cosmetically undesirable. If cosmetic is a concern surgical excision is sometimes done.

Thus in order to prevent complications, prevent progression into Pterygium and to be used in patients apprehensive to surgery, medical management is essential in *Pishtakam*. Since it is a *Kapha* predominant

condition (3) treatable by medical intervention (4), *Anjanam* which is a medical intervention and a localized *Kapha sodhana* procedure was taken as the intervention of choice. In study group of 20 patients *Mahaushadhadi anjanam* (5) was given for *Anjana* therapy for 21 days. The study was conducted in Dept. of Shalakyana Thantra, Govt. Ayurveda College Hospital, Thiruvananthapuram. No clinical studies have been conducted on *Pishtakam* and *Mahaushadhadi anjanam* till date.

Aims and objectives:

The present study was based on following aims and objects:

1. To study and understand the etiopathogenesis of *Pishtakam* (Pinguecula) in *Ayurvedic* classical literature.
2. To find out the effect of *Mahaushadhadi anjanam* in *Pishtakam*.

Materials and methods:

The study was approved by Institutional Ethics Committee (No. AVC IEC 052615/2012). Patients were selected from the O. P. D. of Dept. of Shalakyana Thantra of Govt. Ayurveda College Hospital, Thiruvananthapuram. Patients' written informed consent was taken before starting the treatment. Patients were selected using 'Block Randomization method'. The study was conducted in 40 subjects.

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Diagnostic criteria:

Criteria for inclusion: Age Control group between 40 to 70 years and having signs of *Pishtakam* (Pinguicula) According to *Ayurvedic* Classics as well as Modern science.

Criteria for exclusion: Patients suffering from Pingueculitis, Phlyctenulosis, Nodular episcleritis, Cysts of the conjunctiva, Patients who are contra-indicated for *Anjanam*, Psychic and non co-operative patients were excluded.

Grouping:

Group A-Study group

Group B-Control group

Intervention:

Before doing *Anjanam*, both groups were given *Snehapana* with plain cow's ghee 10 gm for 3 days followed by *Virechanam* with *Gandharva Erandam* (15-30 ml). Further *Nasyam* with *Anutailam* (5ml) was done for another 5 days.

Group A-Study group:

Anjanam was done with *Mahaushadhadi anjanam* for 21 days in the morning. *Choorna* (powder) of *Mahaushadham* (*Zingiber officinale*), *Magadhika* (*Piper longum* Linn), *Mustha* (*Cyperus rotundus* Linn), *Saindavam* (Rock salt) and *Suklamaricha* (*Moringa olifera* Lam-seeds) were taken in equal quantity by weight. Required quantity of *mathulunga swarasa* (juice of *Citrus medica* Linn) was added to the mixture and pounded well to get *rasakriya* (~paste) form. *Harenu matra* (~ 50 mg) was applied in the lower fornix of the eyes using a *Salaka*.

Group B-Control group:

Anjanam was done with *Jateemukuladi Anjanam* (6) for 21 days in the morning. *Jateemukuladi varti* was pounded with honey to get *rasakriya* (~paste) form. *Harenu matra* (~ 50 mg) was applied in the lower fornix of the eyes using a *Salaka*.

Investigations:

Routine hematological and urine analysis were carried out before treatment to rule out any systemic diseases.

Parameters for assessment:

Recording of vertical diameter and horizontal diameter of *Pishtakam* was done before and after *Anjana* therapy in each group using Vernier calipers. The results were assessed after 30 days of treatment, so as to observe and record the changes occurred. Follow up was done 1 month, and 2 months, after the treatment to observe how long the changes last and assess the effectiveness of treatment.

Statistical estimation of results:

The obtained data were analyzed statistically. Statistical derivations like mean, standard deviation and percentage were computed for statistical evaluation. By using paired "t" test before and after treatment effect

were done separately for both study and control group of patients. The drug which is more effective was analysed using the student "t" test for both groups.

Observations and Results :

In this clinical trial of *Pishtakam*, a total number of 40 patients were registered and were randomly distributed into two groups. 20 patients registered in each group. The general observations are shown in Figure-1

Observations regarding laterality of *Pishtakam* revealed that, 75% of patients had *Pishtakam* in unilateral nasal side, 22.5% in bilateral nasal side, 2.5% in unilateral temporal side, and none of the patients had *Pishtakam* in bilateral temporal side, which is identical to the textual reference of Pinguicula. Observations regarding duration showed that, 20% of patients noticed *Pishtakam* within 6 months, 45% within 1 year, 22.5 % within 2 years and 12.5% of patients within 3 years. This suggests the chronic nature of the disease.

While observing the age of patients, 7.5% were between 41-50 years, 32.5 % between 51-60 years and 60% between 61-70 years of age. Thus it is evident that *Pishtakam* is more in old age as it is a degenerative disease. Observing *Prakrithi* of patients, the incidence was more in *Vathakapha Prakrithi* 42.5% who had more chance to develop the disease as the aetiological factors affect them more, followed by *Pitha kapha Prakrithi* 37.5% and *Vatapitta Prakrithi* 20%. Regarding the status of *Agni*, 60% of patients were *mandagni*, 7.5% *theekshnagni*, 12.5 % *vishamagni* and 20% *samagni*. Patients with *mandagni* had more chance of getting Pinguicula. *Apathyaharas* lead to *agnimandya* and *amadasha*. Improper *Agni* will cause creation of *gunaheena dhathus* and leads to malnourishment resulting in the formation of disease.

The occupational status of patients showed that Pinguicula is more in those who work outdoor 50% and 32.5% of patients were housewives who were using the conventional type of chimneys for cooking. 17.5% of patients were indoor workers. Thus working environment plays major role in producing *Pishtakam*. Observing the habit, exogenous factors had great influence in the manifestation of Pinguicula. The incidence was more among persons who were exposed to sunlight 25%. UV radiation causes degenerative changes in the conjunctiva accounts for this. Frequent exposure to dry and hot wind also leads to degenerative changes in conjunctiva played the second role in the manifestation of disease 25%. Exposure to soot was the third factor 17.5% which occurred in persons using the conventional chimneys. The carbon particles in this soot had a great influence in degenerative changes in conjunctiva. Smoke also produced the same changes in the conjunctiva and lead to disease in 17.5%. Prolonged journey also played a role in the manifestation of disease in 15%. Due to overindulgence of external factors like wind, smoke, dust, allergens etc *Vatha* gets vitiated in the eyes and it suits that in *Madhava Nidana*, *Pishtakam* is said to be *Kapha-Vata* in nature.(7)

Effect of therapy:

The reduction in lowering the vertical diameter of *Pishtakam* is seen to be statistically significant ($p < 0.001$) in study group. The lowering of reduction obtained in the follow up also shows that the study is statistically significant ($p < 0.001$) in study group. (Table-1) The reduction in length of *Pishtakam* seen is statistically significant ($p < 0.001$) in control group also. The lowering of length of *Pishtakam* obtained in the follow up were also statistically significant ($p < 0.001$) in control group (Table-2). Mean change in vertical diameter of *Pishtakam* before treatment and 2 months after treatment in study group was 0.9025 and for control group it was 0.2450. This difference was statistically significant. The study drug was more effective than control drug in lowering the vertical diameter of *Pishtakam* 2 months after treatment (Table-3)

The reduction in lowering the horizontal diameter of *Pishtakam* is seen to be statistically significant ($p < 0.001$) in study group. The lowering of reduction obtained in the follow up also shows that the study is statistically significant ($p < 0.001$) (Table-4). The reduction in horizontal diameter of *Pishtakam* seen was statistically significant ($p < 0.001$) in control group also. The lowering of horizontal diameter of *Pishtakam* obtained in the follow up was also statistically significant ($p < 0.001$) in control group (Table-5). Mean change in horizontal diameter of *Pishtakam* before treatment and 2 months after treatment in study group was 0.5325 and for control group it was 0.1900. This difference was statistically significant. The study drug was more effective than control drug in lowering the horizontal diameter of *Pishtakam* 2 months after treatment (Table-6).

Thus it is evident that both drugs were effective and the study drug proved to be more significant in comparison to the control drug ($p < 0.001$).

Probable Mode of action:

Mahaushadhadi anjanam which is said to be "*Pishtakamasu hanyad*" is mentioned in the classical text *Susrutha Samhitha Uttarathantra Sleshmabhisyanda Prathishedha*. The ingredients of this *anjanam* are *Mahaushadham*, *Magadhika*, *Mustha*, *Saindavam* and *Suklamaricha*. Most of the ingredients in the *anjana* are *katu*, *tikta rasa* and *usna veerya* and thus perform the function of *Lekhanam* (~Scarify). Most of the drugs are *kapha Vatha hara* and these *dosas* have importance in the *Samprapthi* of the disease. Thus the action of medicine is not due to the single drug effect but due to

the combined effect after *samskara*. All the medicines in this *Anjana* are *Lekhanam* and *Chakshushya* (~congenial to eye) in nature. *Mahaushdhadi anjanam* flushes out the debris and unwanted tissues performing the function of *Lekhanam*.(8) All drugs are *Chakshushya*, thus protecting the normal tissues of the eyeball from excessive scraping.

Conclusion:

Based on clinical presentation *Pishtakam* can be correlated to pinguecula. The incidence of *Pishtakam* is more among old age group. The patients with *Vathakapha prakrithi* are seen more affected with *Pishtakam*. The study drug *Mahaushadhadi Anjanam* is more effective than control drug *Jateemukuladi Anjanam* in preventing the progression of *Pishtakam*.

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Figure- 1: General Observations (n=40): %

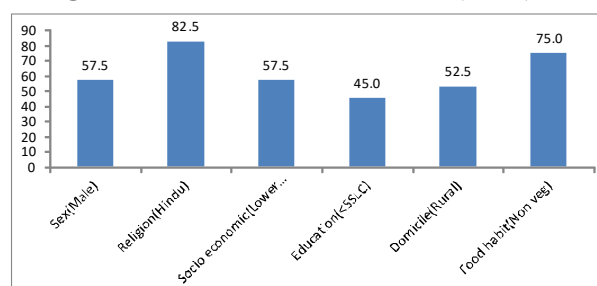


Table-1 Analysis of effectiveness of treatment in lowering the vertical diameter of Pishtakam in study group

Analyzing stage	Mean	SD	Study Group	Paired “t”	P value
BT	1.825	0.712			
AT	1.538	0.722	BT-AT	3.708	0.001
1 MONTH	1.2	0.615	BT-1M	11.180	<0.001
2 MONTH	0.763	0.417	BT-2M	9.920	<0.001
			AT-1M	4.613	<0.001
			AT-2M	7.450	<0.001
			1M-2M	5.552	<0.001

Table-2 Analysis of effectiveness of lowering the vertical diameter of Pishtakam in control group during the treatment

Analyzing stage	Mean	SD	Control Group	Paired “t”	P value
BT	2.390	0.1944			
AT	2.285	0.2059	BT Vs AT	4.972	<0.001
1 MONTH	2.195	0.1791	BT Vs 1M	10.563	<0.001
2 MONTH	2.145	0.1959	BT Vs 2M	10.434	<0.001

Table-3 Comparison of effect of change in vertical diameter of Pishtakam in study group and control group before treatment and 2 month after the treatment

Column	Size	Mean	Standard Deviation	“t” value	P value
Study group BT - 2M after Treatment	20	0.9025	0.28584	9.656	0.000 (<0.001)
Control group BT - 2M after Treatment	20	0.2450	0.10501		

Table-4 Analysis of effectiveness of treatment in lowering the horizontal diameter of Pishtakam in study group of patients

Analyzing stage	Mean	SD	Study Group	Paired “t”	P value
BT	1.950	0.560			
AT	1.500	0.649	BT-AT	5.604	<0.001
1MONTH	1.113	0.535	BT-1M	10.011	<0.001
2MONTH	0.813	0.486	BT-2M	14.591	<0.001
			AT-1M	5.820	<0.001
			AT-2M	8.966	<0.001
			1M-2M	5.080	<0.001

Table-5 Analysis of effectiveness of lowering the horizontal diameter in control group during the treatment

Analyzing stage	Mean	SD	Control Group	Paired “t”	P value
BT	1.550	0.1960			
AT	1.490	0.1881	BT Vs AT	3.559	<0.001
1MONTH	1.405	0.1986	BT Vs 1M	7.855	<0.001
2MONTH	1.360	0.2317	BT Vs 2M	9.970	<0.001

Table-6 Comparison of effect of change in horizontal diameter of Pishtakam in study group and control group before treatment and 2 month after the treatment

Column	Size	Mean	Standard Deviation	“t” value	P value
Study group BT-2M after Treatment	20	0.5325	0.10794	11.137	0.000 (<0.001)
Control group BT-2M after Treatment	20	0.1900	0.08522		
