



## EFFECT OF YASHTIMADHU IN THE MANAGEMENT OF PITTA PRAKOPA

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### ABSTRACT :

*Prakopavastha* is the 2<sup>nd</sup> stage of disease manifestation of *Shatkriyakala*. *Kriyakala* literally means 'Time for Action'. For the applied study of this concept, *Yahtimadhu* was selected to pacify the symptoms of *Pitta Prakopa*. Out of total 32 completed patients, 16 patients were registered in each group by simple random sampling method. Group A was treated by *Yashtimadhu* tablet while Group B was treated with placebo tablet. Effect of therapy was assessed on the basis of Chief and Associated complaint as well as *Agni Bala* and *Jarana Shakti*. Group A (64.54%) shows better results than Group B (40.34%) in all parameters.

**Key words:** *Dosha Dushti, Pitta Prakopa, Shatkriyakala, Yashtimadhu*

**INTRODUCTION:** The *Doshas* undergo perversion due to extravagance in unsuitable diet and lifestyle (*Ahita Ahara-Vihara Sevana*) and bring about abnormalities in *Sharira* which further lead to vitiation of the *Dhatus* and produce disease. The series of *Vikrita Kriya* is developing successively in different *Kala*, which gives an opportunity for *Chikitsa*. Among six stages of *Kriyakala* the *Prakopavastha* of *Pitta Dosha* was selected for the applied study. *Acharya Charaka* and *Vagbhata* denote that, *Doshas* in their normal state they are beneficial for the body while in their vitiated state not only disturb the physiological activities but also produce abnormalities in the physical functions.<sup>1,2</sup> The vitiated state manifests with certain symptomatology depending on the disturbed functions. *Acharya Charaka* states that the increase in the manifestation of the *Dosha*, known by its increased *Karma* is to be understood as the *Vridhdha*

*Dosha* and this is the only way to assess the different physiological and pathological states of the *Doshas*.<sup>3,4</sup> *Kriya* or action, narrate implementation of appropriate measures to 'arrest, disrupt or prolong' the disease process at various points by *Bheshaja* or *Nidana Parivarjana*. *Sushruta* has stated that the treatment of a disease should be initiated at the proper time. It should not be ignored under any conditions whatsoever.<sup>5</sup> *Prakopa* is defined as a state in which the *Dosha* in its *Chayavastha*, having already increased and accumulated in its own *Sthana*, being excited by appropriate causes. In this stage, the *Doshas* undergo further *Vridhdhi*, travel to other *Sthanas* in the body (*Unmargagamita*). It causes appearance of own features of the increased *Doshas*.<sup>6</sup> The person who has developed these symptoms can easily recognize them, and also understands the changes in his health. He should take suitable treatment for controlling the

*Doshas* and thereby avoid further abnormality.

#### **Pitta Prakopaka Hetu:**<sup>7</sup>

- The dietary etiological factors responsible for aggravation of *Pitta* are *Ati Katu, Amla, Lavana, Ushna, Tikshna, Vidahi, Kshara Sevana; Adhyashana, Ajirashana, Atyashana, Viruddha Ahara, Upavasa*
- *Viharaja Hetu - Atapa sevana, Agnisevana, Ayasa and Maithuna*
- *Mansika Hetu - Krodha, Irshya, Shoka, Bhaya*
- *Kalajanya Hetu - Bhukte jiryati Bhojane, Sharad, Grishma Ritu, Madhyahana, Ardha Ratri, MadhyaVaya, Ghanante*

Symptoms of *Pitta Prakopa* are *Amlika* (acid eructation), *Pipasa* (thirst) and *Paridaha* (Burning sensation).<sup>8</sup>

#### **AIM AND OBJECTIVE:**

To assess the effect of *Yashtimadhu* in patients of *Pitta Prakopavastha*.

#### **Rational behind selection of drug:**

In the present study considering the symptoms of *Pitta Prakopa* like *Amlika, Pipasa, Paridaha* etc; it was decided to choose the drug having opposite properties of the above Symptoms. According to the classics *Yashtimadhu* is having the properties like *Guru, Snigdha Guna, Madhura Vipaka, Sheeta Virya* and it is stated as *Pitta Shamaka* drug. Hence it was selected for the clinical trial.

#### **MATERIAL AND METHODS:**

Individuals attending the OPD and IPD of the department of Basic Principles of I.P.G.T. & R.A., Hospital Jamnagar, fulfilling the criteria of selection for *Pitta Prakopavastha* was selected for present study. The special research proforma was prepared mainly on *Ayurvedic* guidelines.

#### **INCLUSION CRITERIA:**

- Patients between 18 to 60 years age group
- Patients having classical signs and symptoms of *Pitta Prakopa*
- Patients were selected without any bars of sex, religion and occupation etc.

#### **EXCLUSION CRITERIA:**

- Patients having clear cut manifestation of any specific or non-specific *Pittaja Vyadhi*
- Patients suffering from chronic major illness, like- Jaundice, AIDS, Cancer, Tuberculosis, Diabetes Mellitus etc. were excluded.

#### **Criteria for the Assessment: Scoring Pattern**

Following subjective criteria was applied before and after treatment for the assessment of therapy.

#### **Chief Complaints:**

##### **a) *Amlika* : Sour Belching**

Grade	Description
0	No <i>Amlodgara</i> at all
1	Occasionally, once or twice in a week
2	Frequently, alternate days or anytime
3	Everyday <i>Amlodgara</i> and not relieved by any measure

##### **b) *Pipasa* : Excessive Thirst**

0	Normal Thirst (taking 6-8 glasses of water daily)
1	Patient having 10% more thirst
2	Patient having 20% more thirst
3	Patient having 50% more thirst

##### **c) *Paridaha* : Burning sensation**

0	No <i>Daha</i>
1	Occasionally and localized <i>Daha</i> once a day
2	Localized <i>Daha</i> twice a day, at more than one place
3	Burning sensation all over the body throughout the day

**Associated Complaints:**

**a) *Alpa Nidrata: Decreased Sleep***

Grade	Description
0	Normal sleep for 6-8 hrs
1	Patient get sleep for 4-5 hrs
2	Patient get sleep for less than 4 hrs
3	Patient get sleep for less than 3 hrs

**b) *Balahani: General Debility***

0	Doing all the activities and feels normal state
1	Can do minimum activities with routine work
2	Can do only routine wok
3	Unable to do even routine work

**c) *Shita Kamitva: Desire for Cold Substances***

0	Optimum desire for <i>Shita</i> and <i>Ushna dravya</i>
1	Desire to take <i>Shita dravya</i> internally as cold-drinks, cold water, ice-cream etc.
2	Desire to take <i>Shita dravya</i> externally too

3 Frequently more desire for *Shita dravya* both internally and externally

**d) *Bhrama: Vertigo***

0	No <i>Bhrama</i>
1	Occasionally <i>Bhrama</i> once in a week, able to maintain balance
2	<i>Bhrama</i> once in a day and able to maintain balance with support
3	Severe <i>Bhrama</i> , Not able to maintain balance even with support

**e) *Pitavarnata: Yellowish Discoloration***

0	No <i>Pitavarnata</i>
1	Light yellow discoloration in any one of <i>Mutra / Purisha</i>
2	Yellow discoloration in any one of <i>Mutra/ Purisha/ Netra</i>
3	Dark yellow discoloration in any one of <i>Mutra, Purisha, Netra, Twak</i>

All the signs and symptoms considered for the assessment were based on clinical symptoms for *Pittaprakopa, Abhyavaharana Shakti* and *Jarana Shakti*. The criteria to assess the effect of therapy are shown in Table 1.

**Table 1: Criteria to assess the effect of Therapy**

No.	Criteria	Percentage
1	Complete remission	100%
2	Marked improvement	>75 to 99%
3	Moderate improvement	>50 - 75%
4	Mild Improvement	>25 - 50%
5	Unchanged	<25%

**Laboratory investigations:** Following investigations were carried out to rule out major pathological illness before treatment only.

- Haemogram :T.L.C., D.L.C., Hb , ESR, Total RBC count
- Biochemical: FBS, S.Cholesterol, Blood Urea, S.Creatinine, SGPT, S.Bilirubin, Uric Acid
- Urine :Routine & Microscopic
- Stool :Macroscopic and Microscopic

**Ethical approval:**

This project has been cleared by Institutional Ethics Committee vide its letter No. PGT/7-A/2012-2013/1964, dated: 21/09/2012. This trial is also registered in CTRI, reg. no. CTRI/2014/04/004542.

**Drug and Posology:**

Group A: These patients were treated with *Yashtimadhu* tablet 500 mg 4 tab. BD in *Madhyabhakta Kala* with Normal Water for 7 days.

Group B: These patients were treated with placebo tablet 500 mg 4 tab. BD in *Madhyabhakta Kala* with Normal Water for 7 days.

**Statistical analysis:** by t test. The information collected on the basis of above observations was subjected to statistical analysis in terms of mean (x), S.D. and

**OBSERVATION AND RESULTS:**

**Table 2: Effect of therapy on Chief complaints in Group A (Yashtimadhu tablet)**

Chief Complaints	N	Mean		% Relief	S. D.	S. E.	‘t’	P
		B.T.	A.T.					
<i>Amlika</i>	16	2.19	0.31	85.71	0.62	0.16	12.11	< 0.001
<i>Pipasa</i>	15	1.69	0.38	77.78	0.79	0.2	6.62	< 0.001
<i>Paridaha</i>	16	1.31	0.5	61.90	0.75	0.19	4.33	< 0.001

**Table 3: Effect of therapy on Chief complaints in Group B (Placebo Tablet)**

Chief Complaints	N	Mean		% Relief	S. D.	S. E.	‘t’	P
		B.T.	A.T.					
<i>Amlika</i>	16	2.13	1.19	44.12	0.44	0.11	8.47	< 0.001
<i>Pipasa</i>	16	1.5	0.94	37.5	0.51	0.13	4.39	< 0.001
<i>Paridaha</i>	16	1.31	0.94	28.57	0.5	0.13	3	< 0.01

**Table 4: Total effect of therapy on Chief Complaints of 32 patients**

Total effect of therapy	No.	Mean		% of relief	S.D.	S.E.	T	P
		B.T.	A.T.					
<b>Group A</b>	16	5.19	1.19	77.11	1.46	0.37	10.95	<0.001
<b>Group B</b>	16	4.94	3.06	37.97	0.62	0.16	12.11	<0.001

**Table 5: Effect of therapy on Associated complaints in Group A**

Associated Complaints	N	Mean		% Relief	S. D.	S. E.	‘t’	P
		B.T.	A.T.					
<i>Alpa Nidrata</i>	15	1.56	0.75	52	0.66	0.16	4.96	< 0.001
<i>Balahani</i>	14	1	0.4	56.25	0.63	0.16	3.96	0.002
<i>Pitavarnata</i>	7	0.38	0.13	66.67	0.45	0.11	3.16	0.025
<i>Shitakamitva</i>	15	1.07	0.4	62.5	0.62	0.16	4.18	<0.001
<i>Bhrama</i>	13	1.31	0.44	66.67	0.62	0.16	5.65	<0.001

**Table 6: Effect of therapy on Associated complaints in Group B**

Associated Complaints	N	Mean		% Relief	S. D.	S. E.	‘t’	P
		B.T.	A.T.					
<i>Alpa Nidrata</i>	14	1.38	0.88	36.36	0.52	0.13	3.87	0.002
<i>Balahani</i>	10	0.88	0.63	28.57	0.45	0.11	2.24	0.041
<i>Pitavarnata</i>	8	0.56	0.44	22.22	0.34	0.085	1.46	0.164

S.E. Student Paired ‘t’ test was carried out to assess the effect of all the remedies. The obtained results were interpreted as,

Insignificant P > 0.05

Significant P < 0.05 or

Highly significant P < 0.01 or < 0.001

**Study Design:** Randomized open clinical trial.

<i>Shitakamitva</i>	14	1.13	0.56	50	0.63	0.16	3.57	0.003
<i>Bhrama</i>	13	1.19	0.81	31.58	0.5	0.13	3	0.009

**Table 7: Total effect of therapy on Associated Complaints of 32 patients**

Total effect of therapy	No.	Mean		% of relief	S.D.	S.E.	T	P
		B.T.	A.T.					
<b>Group A</b>	16	5.25	2.13	59.52	1.82	0.46	6.86	<0.001
<b>Group B</b>	16	5.13	3.31	35.37	0.91	0.23	7.96	<0.001

**Table 8: Effect of Therapy on Agni Bala in Group A**

Agni Bala	N	Mean		% Relief	S. D.	S. E.	't'	P
		B.T.	A.T.					
<i>Ruchi Aharakale</i>	14	1.25	0.38	70	0.62	0.16	5.65	< 0.001
<i>Abhyavahrana Shakti</i>	16	1.31	0.5	61.9	0.75	0.19	4.33	< 0.001

**Table 9: Effect of Therapy on Agni Bala in Group B**

Agni Bala	N	Mean		% Relief	S. D.	S. E.	't'	P
		B.T.	A.T.					
<i>Ruchi Aharakale</i>	15	1.19	0.5	57.9	0.48	0.12	5.75	< 0.001
<i>Abhyavahrana Shakti</i>	13	1.06	0.7	29.4	0.48	0.12	2.61	< 0.001

**Table 10: Total Effect of therapy on Agni Bala of 32 patients**

Total effect of therapy	No.	Mean		% of relief	S.D.	S.E.	T	P
		B.T.	A.T.					
<b>Group A</b>	16	2.56	0.88	65.9	1.25	0.31	5.4	<0.001
<b>Group B</b>	16	2.25	1.25	44.4	0.63	0.16	6.32	<0.001

**Table 11: Effect of Therapy on Jarana Shakti in Group A**

Jarana Shakti	N	Mean		% Relief	S. D.	S. E.	't'	P
		B.T.	A.T.					
<i>Laghuta</i>	15	1.2	0.4	66.67	0.56	0.15	5.53	< 0.001
<i>Utsaha</i>	12	1.17	0.5	57.14	0.49	0.14	4.69	< 0.001
<i>Udgara Shuddhi</i>	14	1.29	0.5	55.56	0.58	0.16	5.08	< 0.001
<i>Kshudha</i>	15	1.27	0.53	57.89	0.46	0.12	6.20	<0.001
<i>Klamaparigamana</i>	13	1.31	0.62	52.94	0.48	0.13	5.19	<0.001
<i>Mala Utsarga</i>	12	1.58	0.75	52.63	0.39	0.11	7.42	<0.001

**Table 12: Effect of Therapy on Jarana Shakti in Group B**

Jarana Shakti	N	Mean		% Relief	S. D.	S. E.	't'	P
		B.T.	A.T.					
<i>Laghuta</i>	15	1.19	0.63	47.37	0.51	0.13	4.39	<0.001
<i>Utsaha</i>	13	0.88	0.63	28.57	0.45	0.11	2.24	0.041
<i>Udgara Shuddhi</i>	14	1.13	0.69	38.89	0.51	0.13	3.42	0.004
<i>Kshudha</i>	11	0.94	0.5	46.67	0.51	0.13	3.42	0.004

<i>Klamaparigamana</i>	13	1	0.56	43.75	0.51	0.13	3.42	0.004
<i>Mala Utsarga</i>	10	1	0.38	62.5	0.5	0.13	5	<0.001

**Table 13: Total Effect of therapy on Jrana Shakti of 32 patients**

Total effect of therapy	No.	Mean		% of relief	S.D.	S.E.	T	P
		B.T.	A.T.					
<b>Group A</b>	16	6.56	2.75	58.1	1.6	0.4	9.53	<0.001
<b>Group B</b>	16	6.12	3.38	44.9	1.13	0.28	9.77	<0.001

**Table 14: Total Effect of therapy on 32 patients**

Total effect of therapy	No.	Mean		% of relief	S.D.	S.E.	T	P
		B.T.	A.T.					
<b>Group A</b>	16	19.56	6.94	64.54	5.19	1.3	9.73	<0.001
<b>Group B</b>	16	18.44	11	40.34	1.59	0.40	18.71	<0.001

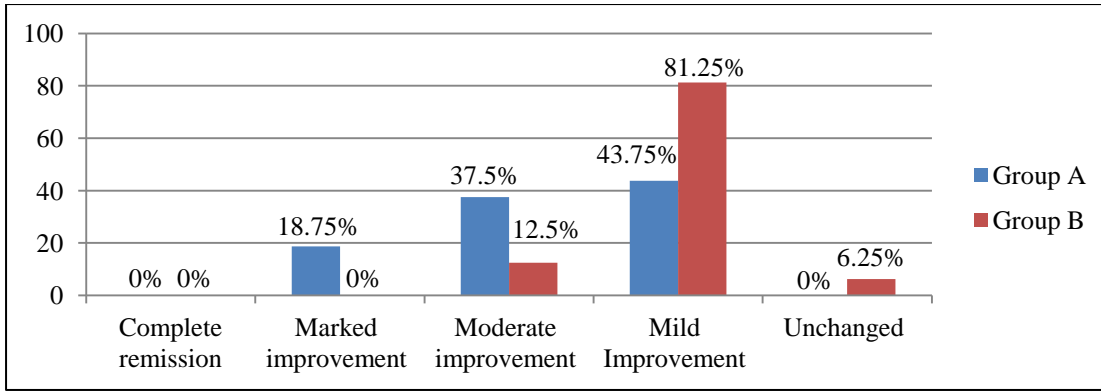
**DISCUSSION:** Overall improvement in chief complaint, percentage relief observed was higher and statistically highly significant in Group A. As *Yashtimadhu* is *Pitta Shamaka* by its *Madhura* and *Sheeta Guna* it pacifies the vitiated *Pitta Dosha*. Though the results in Group B are looking statistically highly significant but they are may be due to the general instructions of *Pathya-pathya* and *Nidanaparivarjana* in both the groups.[Table 2-4] On Associated Complaints, Group A shows better results as *Yashtimadhu* mitigate the *Prakupita Pitta Dosha* and thereby correct *Pitta Prakopa*. Hence the associated symptoms got maximum relief as they are produced by vitiated *Pitta*. [Table 5-7] Effect of therapy on *Agni Bala* and *Jaranashakti* showed that percentage relief in group A is higher because of the *Pitta Shamaka* effect of *Yashtimadhu*. *Agni* is the integral part of *Pitta*. *Pitta* does all the digestive activities functionally by considering its main constituent status of *Agni*.<sup>9</sup> When the *Pitta* is vitiated the *Agni* cannot work properly. Due to *Yashtimadhu* the *Prakupita Pitta*

become normal and does all the digestive activity normally. [Table 8-13]

**Total effect of therapy in Pitta Prakopa:** Both the groups have highly significant result but percentage wise better improvement was found in Group A. [Table 14] All these observations prove that *Pitta Prakopa* is the condition caused by vitiation of *Pitta* with *Ushna, Tikshnadi Guna* predominance. Thus *Yashtimadhu* (by its *Madhura, Sheeta* etc. *Guna*) is effectively relieved the condition of *Pitta Prakopa*. Overall effect of therapy is shown in chart 1.

**CONCLUSION:** Prevention of disease is possible by efficient treatment in the first three stages. The observations in the clinical study reveal that the *Yashtimadhu* gives better result in Group A due to *Madhura Rasa* and *Sheeta-Snigdha* properties which counteracts the symptoms of *Pitta Prakopa*. Percentage relief in group B was comparatively too less then group A. Thus it can be said that it is due to the incapableness of Placebo in pacification of vitiated *Pitta*.

**Chart 1: Overall effect of Therapy**



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