

## EFFECT OF YASHTIMADHU IN THE MANAGEMENT OF PITTA PRAKOPA

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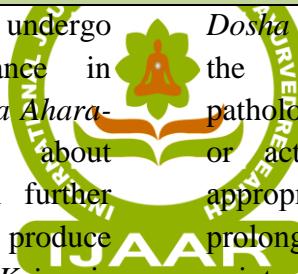
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### ABSTRACT :

*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 *Vaghbata* 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 *Vriddha*



*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 *Vriddhi*, 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, Ajirnashana, 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.

### Criterias 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*

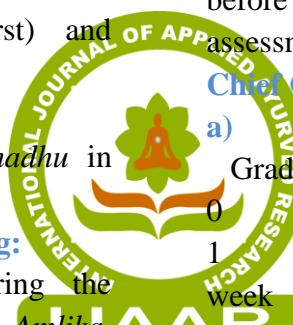
Grade	Description
0	No <i>Amlodgara</i> at all
1	Occasionally, once or twice in a week
2	Frequently, alternate days or anytime
3	Everyday <i>Amlodgara</i> and not relieved by any measure

##### 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 work
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	IJAAR	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

Shitakamitva	14	1.13	0.56	50	0.63	0.16	3.57	0.003
Bhrama	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

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

**Table 13: Total Effect of therapy on Jhana 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*

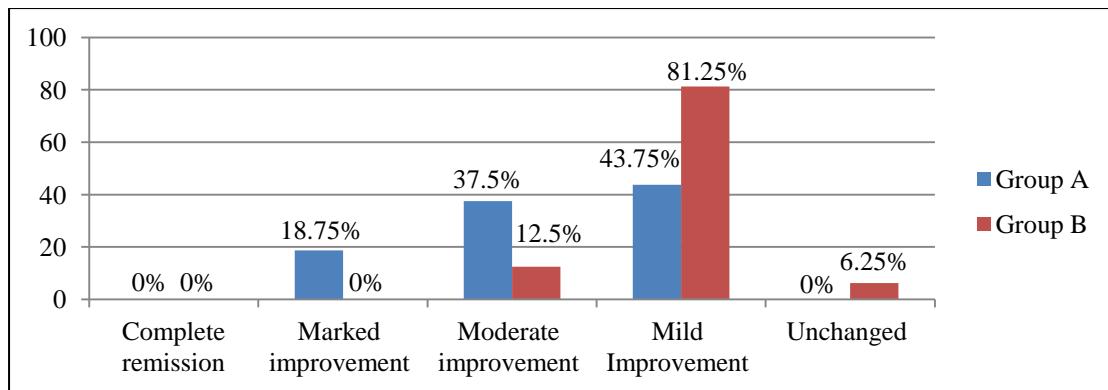
become normal and does all the digestive activity normally. [Table 8-13]

#### 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-Snidgha* 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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Declared