

Clinical Research

A clinical study of *Panchakola Siddha Yavagu* in the management of *Agnimandya*

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Abstract

This research is carried out with the aim to study *Agnidipana* effect of *Panchakola Siddha Yavagu* which comprises *Pippali* (*Piper longum*), *Pippalimula* (root of *Piper longum*), *Chavya* (*Piper chaba* Hunter), *Chitraka* (*Plumbago zeyheri*) and *Nagara* (*Zingiber officinale*) which are all in equal proportion processed in six times of water. A randomized open clinical trial on 47 patients of *Agnimandya* has been screened on the basis of clinical findings and the patients were allocated to two groups. Group A having 29 cases received the trial drug (*Panchakola Siddha Yavagu*) and 18 cases in Group B received simple *Yavagu* with roasted rice powder as the control group. Special scoring pattern was done for the assessment of *Agnimandya* state. Complete cure of the patient was found in 17.24% of the patients, 34.48% patients were improved moderately as well as markedly, whereas mild improvement was observed in 13.80% patients by treatment with *Panchakola Yavagu*.

Key words: *Agnimandya*, *Agnidipana*, *Panchakola*, *Yavagu*

Introduction

In the present era, human being became very irregular in their life style. Especially the life style of urban society is becoming very fast and stressful. This circumstance frequently leads people toward irregular and bad habits of *Ahara*, *Vihara* with the suppression of natural urges like *Kshudha* etc and creating problems like *Agnimandya*, *Ajirna*. This is the reason for the day by day increase in the incidence of the diseases due to gastrointestinal derangement.

The *Jatharagni* represents all the digestive chemicals and enzymes produces in or poured in the gastrointestinal tract which are responsible for digestion of different components of ingested food. The *Jatharagni* is considered as the master *Agni* and is claimed to govern the function of all other *Agnis* besides its own function.^[1] As a part of the hypothesis to assess the principle of *Agnimandya* clinically, here state of *Agni* i.e. *Agnimandya* state which is responsible for indigestion and for many diseases was considered for the study.

Agnimandya i.e. *Agni* is not stimulated at all. This state mainly

caused due to the *Vata* and *Kapha* *Dosha*, since vitiated *Pitta* *Dosha* causes the state of *Atidiptagni* which is also known as *Atyagni*.^[2] All the *Acharya* concur that only the *Samagni* is the *Prakrita Agni* and other types of *Agni* are in the *Vikrita* state.^[3] Though these types are in the *Vikrita* state, it does not execute any harm to the person if they consume food in the proper way; otherwise, it leads to the *Agnimandya* state which is quite disturbing to routine life. This *Agnimandya* is responsible for many diseases.^[4] Thus to prevent further progress of the other diseases, it is necessary to cure it at the first stage.

The present study is carried out to evaluate the effect of *Agnidipana* by using *Yavagu Kalpana*. This was also taken as applied study described in the second chapter of the *Bhesaja Chatushka*, i.e. first *Chatushka* in *Sutrasthana* of *Charaka Samhita*. Since twenty-eight *Yavagu* were initially described in the second chapter (*Apamargatanduliya Adhyaya*), but physician forgets the use of this *Yavagu* in the day-to-day practice. So, here, first *Yavagu*, i.e. *Dipaniya Yavagu* was taken for the clinical study.

Aims and Objectives

1. To assess the state of *Agnimandya*.
2. To assess the applied aspect of *Panchakola Yavagu* (efficacy) for *Agnidipana*.
3. To assess the comparative study between *Panchakola Yavagu* and *Yavagu*.

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Materials and Methods

Drug

In the first group, medicines were used in the preparation of Krita Yavagu and Akrita Yavagu was given in the control group

Ingredients of Dipaniya Yavagu

Sanskrit name	Botanical name	Part used	Ratio
Pippali	<i>Piper longum</i>	Phala (fruit)	1
Pippali Mula	Root of <i>Piper longum</i> Linn	Mula (root)	1
Cavya	<i>Piper chaba</i> Hunter	Phala (fruit)	1
Citraka	<i>Plumbago zeylanica</i> Linn	Mula (root)	1
Nagara	<i>Zingiber officinale</i>	Kanda (rhizomes)	1

Preparation of Yavagu

1. First medicated water (*Panchakola Siddha*) is prepared with six times^[5] of water, and then rice was advised to cook with this medicated water. *Matra* of the rice was not fixed because of the variation found in the *Agni* of the person to person.
2. *Yavagu* was prepared with simple rice with six times of water and instead of addition of ginger, black pepper and salt, rice powder was added known as *Akrita Yavagu* which has been advised for Group B. This roasted rice powder was added in the *Yavagu* for the purpose of assurance to the patient that he or she was treated with some effective medicine.

Patients

Individuals attending the OPD and IPD of the department of basic principles of I.P.G.T. and R.A., Hospital Jamnagar, fulfilling the criteria of selection were included in the present study. The special proforma was prepared mainly on Ayurvedic guidelines.

Criteria of selection

For the assessment of *Agnidipana*, *Abhyavaharana Shakti* was the main criteria. So for the present study, patients were selected on the basis of criteria fulfilling state of *Agnimandya*. The gradation for the inclusion criteria are as follows:

- Patients having decrease in *Abhyavaharana Shakti*
 1. Patient is able to consume food only up to 75% of his capacity with normal frequency-1
 2. Patient is able to consume food only up to 50% of his capacity with irregular frequency-2
 3. Patient is able to consume food only up to 25% of his capacity-3
- Decrease in *Jarana Shakti*:
 - All the symptoms are present - 3
 - Four-five symptoms are present (75%) - 2
 - Three symptoms are present (50%) - 1
 - One-two symptoms are present (25%) - 0

Patients were selected from the O.P.D and I.P.D of I.P.G.T and R.A irrespective of sex and religion.

Criteria of exclusion

- Patients suffering from chronic systemic diseases after *Agnimandya* and *Agnimandya* causes due to constant

medication were excluded.

- Also the patients contraindicated for *Yavagu* administration as per the Ayurvedic classics were excluded from this study.^[6]
- Patients having *Tikshnagni* were also excluded from the present study.

Diagnostic criteria

- Patients were diagnosed and assessed thoroughly on the basis of Ayurvedic classical signs and symptoms of *Agnimandya*.
- All the patients were subjected for routine haematological examination, urine examination, and stool examination only to exclude any other pathology.

Design of groups and management

Design of the study: Randomized open clinical trial

Group A: *Panchakola Siddha Yavagu*

Group B: Simple *Yavagu* with roasted rice powder

Details	Group A	Group B
Drug	<i>Panchakola Siddha Yavagu</i>	Simple <i>Yavagu</i> with roasted rice powder
Dose	70 g	70 g
<i>Sevana kala</i>	Instead of lunch	Instead of lunch
Duration	Seven days	Seven days

Criteria of assessment

The main criteria for the assessment are *Pariksha* of the *Abhyavaharana Shakti* and *Jarana Shakti*.^[7] Symptomatic relief obtained by the treatment given was assessed B.T. (before treatment) and A.T. (after treatment) with gradation, on the basis of scoring pattern.

Criteria for overall assessment of therapy

Complete remission	100% relief	Mild improvement	25% to 50% relief
Marked improvement	>75% relief	Unchanged	<25% or No relief
Moderate improvement	>50 to 75% relief		

General observations

Total of 31 patients were registered in Group A whereas 20 patients were registered in Group B including drop outs of 2 in each group [Table 1]. The observations of dietary pattern, *Aharaja hetu*, *Viharaja hetu*, disease duration, *Abhyavaharana*, *Jarana shakti* and *Agni* wise distribution is shown in Tables 2 to 8.

Results

Effect of therapy on *Abhyavaharana Shakti*

In Group A, *Panchakola Siddha Yavagu* provides better result (75%); in Group B, placebo also shows better improvement (66.67%) on the symptoms of decrease in *Abhyavaharana Shakti*. But applying Chi-square method, statistically insignificant results were obtained. This proves that both the groups have same result in improving the *Abhyavaharana Shakti* [Tables 9 and 10].

Table 1: Observations

Patients	No. of patients		Total
	Group A	Group B	
Completed	29	18	47
Drop out	02	02	04
Total	31	20	51

Table 2: Dietary pattern-wise distribution of 51 patients

Habit	No. of patients		Total	%
	Group A	Group B		
Samashana	3	1	4	7.84
Vishamashana	21	17	38	74.51
Adhyashana	6	—	6	11.76
Viruddhashana	17	8	25	49.02

Table 3: Aharaja Hetu wise distribution of 51 patients

Aharaja Hetu	No. of patients		Total	%
	Group A	Group B		
Alpa Bhojana	4	8	12	23.53
Atimatrasevana	7	10	17	33.33
Atiambupana	8	2	10	19.61
Asuci Bhojana	7	5	12	23.53

Table 4: Viharaja Hetu wise distribution of 51 patients

Viharaja Hetu	No. of patients		Total	%
	Group A	Group B		
Divaswapna	18	9	27	52.94
Ratrijagarana	10	5	15	29.41
Atidruta Bhojana	5	4	9	17.65
Ativilambita Bhojana	15	10	25	49.02
Ativyayama	4	2	6	11.76
Atijalapana during Bhojana	15	3	18	35.29
Atanmana Bhunjita	11	10	21	41.18
Vega Vidharana	13	17	30	58.82

Effect of therapy on Jarana Shakti

Though Group A and Group B showed 80 and 53.19% improvement in *Udgara Suddhi*, statistically it was insignificant. The 72.58% relief was found in Group A while only 32.35% relief was found in Group B in the symptom of *Deha Laghava*. Statistically it was significant result ($P < 0.05$). Group A showed 73.07% and Group B 53.33% improvement in the symptom of *Kshudha*. Statistically it shows insignificant result ($P < 0.1$). The 58.70% relief was found in the symptom of *Klama Parigamana* in Group A and 41.94% relief was found in Group B which is statistically significant ($P < 0.02$). 93.02% improvement was found in Group A and 68.97% improvement in Group B in the symptom of *Vegotsarga*. Statistically it was found to be insignificant ($P < 0.1$). 75% improvement was found in Group A while 36.36% of improvement in Group B in

Table 5: Duration of the disease wise distribution of 51 patients

Duration of the Agnimandya	No. of patients		Total	%
	Group A	Group B		
10-30 days	20	14	34	66.67
>30 days	11	6	17	33.33

Table 6: Abhyavaharana Shakti wise distribution of 51 patients

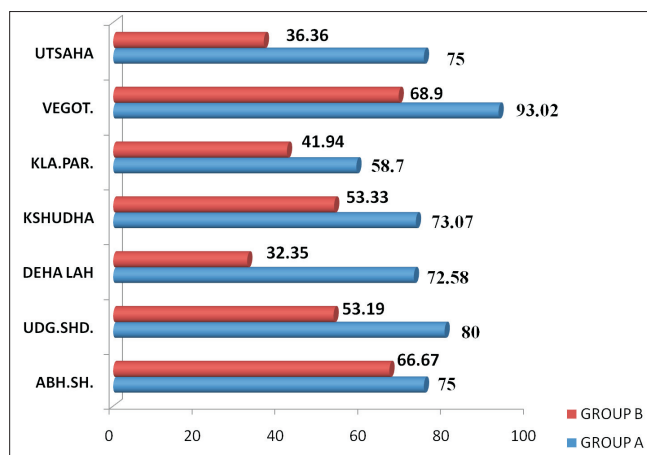
Abhyavaharana Shakti	No. of patients		Total	%
	Group A	Group B		
Madhyama	18	4	22	43.14
Avara	13	16	29	56.86

Table 7: Jarana Shakti wise distribution of 51 patients

Jarana Shakti	No. of patients		Total	%
	Group A	Group B		
Madhyama	14	8	22	43.14
Avara	17	12	29	56.86

Table 8: Agni wise distribution of 51 patients

Agni	No. of patients		Total	%
	Group A	Group B		
Vishamagni	15	9	24	47.06
Mandagni	16	11	27	52.94

**Figure 1: Effect of therapy on chief complaints**

the symptom of *Utsaha*, and statistically it shows highly significant result ($P < 0.001$) [Figure 1 and Table 9].

Results of some other data associated with Agnisada state (Chi-square method)

- Effect of therapy on duration of 10-30 days and more than 30 days.

Statistically it shows highly significant result. Thus, it can be concluded that a drug shows better result in the duration of 10-30 days and it shows statistically insignificant result on duration of more than 30 days [Table 10].

Table 9: Results on chief complaints by applying Chi-square test

Lakshana	Chi-square method	P
Abhyavaharana Shakti	0.0426	-
Udagara Shuddhi	1.395	<0.5
Deha Laghavam	5.277	<0.05
Kshudha	3.676	<0.1
Klama Parigamana	5.523	<0.02
Vegotsarga	3.696	<0.1
Utsaha	12.475	<0.001

Table 10: Results on the other data of Agnimandya

Lakshana	Chi-square method	P
Duration of 10-30 days	15.03	<0.001
Duration > 30 days	2.812	<0.1
Vishamagni	7.91	<0.005
Mandagni	10.85	<0.001

• Effect of therapy on Vishamagni and Mandagni

It shows that effect of therapy had significant result in Vishamagni ($P < 0.005$). It also proves that effect of therapy has highly significant result in Mandagni ($P < 0.001$) [Table 10].

Total effect of therapy

Complete remission was found in 17.24% of patients in Group A (Panchakola Siddha Yavagu) while not any patient was completely cured by Group B (placebo). Marked improvement was found in 34.48% patients in Group A while 11.11% patients in Group B. Total 34.48% patients showed moderate improvement in Group A while 27.78% patients showed moderate improvement in Group B. Mild improvement was found in 13.80% patients of Group A while 61.11% patients in Group B showed mild improvement. None of the patient was unchanged in both the groups. Statistically Panchakola Siddha Yavagu shows highly significant results ($P < 0.001$) by applying Chi-square method [Tables 11 and 12].

Discussion

Maximum of the patients were habituated with Vishamashana followed by the Viruddhashana, Adhyashana and Samashana [Table 2] respectively. As per Acharya Sushruta, these are the most important factors in creating the Agnimandya.^[8] Maximum patients were taking Atimatrashana, followed by Alpabhojana as well as Asuchibhojana and then Atyambupana [Table 3]. Atimatrashana as well as Alpabhojana are included in the amatravata Ahara which further leads to vitiation of Vata (Vishamagni) and Tridosha Prakopa respectively.^[9] Ashuchibhojana influences the mental status of the individual which further leads to Agnisada state.^[10] Maximum patients have a habit of Vegavidharana (Kshudha Vega mainly), followed by Divaswapna, Ativilambita Bhojana, Atanmana Bhunjita and habit of Ratrau Jagarana [Table 4]. Vegavidharana is prone to Vata Prakopa, which is mainly responsible for vitiation of Vishamagni.^[11] Divaswapna causes Kapha-Pitta Prakopa and Ratrau Jagarana causes Vata Prakopa which is the main Dosha

Table 11: Total effect of therapy (Chi-square test)

Groups	N.S.I.*	G.I.**	Row total	
Group A	4	25	29	$\chi^2 = 13.725$
Group B	11	7	18	$P < 0.001$
Column total	15	32	47	

*NSI- Not sufficiently improved, **GI- Good improvement

Table 12: Total effect of therapy

Category	Group A		Group B	
	No. of patients	%	No. of patients	%
Unchanged	-	-	-	-
Mild improvement	4	13.80	11	61.11
Moderate improvement	10	34.48	5	27.78
Marked improvement	10	34.48	2	11.11
Complete remission	5	17.24	-	-

involvement of the state of Agnimandya. These both tendencies of Nidra are included in the category of Akalashayana.^[12] Ativilambita Ahara causes dissatisfaction during Bhojana so that Atimatra Ahara is taken by the person which leads to Agnimandya state.^[13] Maximum 66.67% of the patients having 10-30 days of duration of the disease while 33.33% patients having more than 30 days duration [Table 5]. Maximum patients have Avara Ahara shakti and then Madhyama Ahara shakti and same findings have been found in the Jarana Shakti also [Tables 6 and 7]. The above both data shows that, the Abhyavaharana as well as Jarana Shakti are dependent on each other. Thus it again proves that Agni can be examined by both Ahara Shakti and Jarana Shakti.^[14] The table on Agni wise distribution shows that 52.94% patients had Mandagni while 47.06% patients had Vishamagni [Table 8]. It shows that there is relevancy of Nidana and type of Agni.

Probable mode of action of Panchakola Siddha Yavagu

During the Chikitsa, Bhiska use several types of combination of same Dravya to increase its efficacy. Here also the Samyoga of Panchakola with Yavagu amplified its efficacy more. This Guna is very important among the Paradi Guna. According to Acharya Charaka, all the Karma (Chikitsa) is only caused due to the Samyoga.^[15] Hence due to the Samyoga of the Panchakola with the Yavagu the effectiveness is increased. This is one of the reasons for getting better result in the present study. According to the Rasapanchaka of the Panchakola:

- Panchakola have the Katu Rasa dominancy which is Agnidipana Rasa.^[15]
- Vipaka: Vipaka of Panchakola is Katu.^[16] Rasa of the Dravya is same as that of Vipaka so that Karya will occur according to the Rasa i.e. Agnidipana.
- Virya: Virya is according to the Rasa i.e. Ushna,^[17] since again the Karya will occur according to the Rasa (Katu).

This shows that Panchakola has augmenting effect of Agnidipana according to the Rasa, Vipaka and Virya. Pachana is one of the properties of the Panchakola since it also shows the effect on the Jarana Shakti. This Panchakola Siddha Yavagu shows improvement in the Vishamagni as well as on

Mandagni. As by *Katu Rasa*, *Katu Vipaka* and *Ushna Virya* i.e. by the entire aspect drug shows the effect on the Mandagni. In *Vishamagni* it can act by the *Ushna Virya* of the drug^[17] and *Sara (Vatanulomana)* property of the *Yavagu* itself.^[18] Hence both *Agni* get improved. In the present study though placebo i.e. roasted rice powder is used but the form of drug is same in both the groups i.e. *Yavagu*. *Yavagu* itself is considered as *Dipaniya*^[19] which shows good improvement in some extent of symptoms.

Properties of ingredients of Panchakola

Piper longum (Pippali): Rejuvenating, stimulant, expectorant, emollient, carminative, aphrodisiac, warming, decongestant.^[19]

Piper chaba Hunter (Chavya): The fruits of this species of *Piper* are considered as stimulants, anti-catarrhal and carminative.^[20]

Plumabago zeylenica (Chitraka): Promotes appetite, helps digestion. Used for dyspepsia, piles, and skin diseases.^[21]

Zingiber officinale (Shunthi): Stimulating, diaphoretic, expectorant, carminative.^[22] Ginger is the delicious common spice used in Ayurvedic medicine to improve digestion and to prevent nausea. These properties for helping bowel movements and relaxing the muscles are controlling the digestive system. Ginger is considered as an adjuvant in many Ayurvedic formulas in which it enhances absorption and prevents gastrointestinal side effects.^[23]

Latest research also shows the action of these individual drugs as a stimulant of appetite as well as a carminative. A carminative is a remedy which tends to overcome flatulency, that is, distention of the stomach or colon with gas^[22] and appetizer which stimulates the appetite.^[24]

Out of these carminatives, many of them are pleasantly aromatic, and these are used as flavors, especially in the dilute forms of the official waters and spirits. They tend to promote the appetite, but they are irritants enough in undiluted form to induce a protective flow of saliva. In the stomach, they are local irritants, and if given in sufficiently concentrated form, they dilate the vessels and produce hyperemia, thus giving a feeling of well-being in the stomach region. At the same time, they stimulate motor activity and the expulsion of accumulated gases. Thus, the functions of motion and absorption are stimulated, but probably not that of secretion unless they promote appetite. Hertz (1910) has observed by X-rays that very promptly following the administration of a strong carminative by mouth colon peristalsis is set up. This is a reflex action, and it tends to cause the expulsion of accumulations of intestinal gas, and to overcome colic or griping. Absorption is rapid from stomach and duodenum.^[25]

Conclusion

Agnimandya state is mainly related with the *Vata* and *Kapha Dosh*. By assessing the principle of *Agnidipana*, *Panchakola Siddha Yavagu* (Group A) shows highly significant results in the patients of *Agnimandya* and simple *Yavagu* (Group B) also shows the same

improvement as in Group A in the symptom of *Abhyavaharana Shakti*, *Udgara Shuddhi*, *Kshudha* and *Vegotsarga*. As duration of therapy is only seven days which is insufficient for the *Agnimandya* having duration of more than 30 days; in this case increased duration of therapy may show good improvement.

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References

1. Agnivesha, Charaka Samhita. Ayurveda Dipika Commentary of Chakrapanidatta. Edited by Vaidya Jadavaji Trikamji acarya; Cikitsasthana 15/39. 5th ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2001. p. 516.
2. Ibid Charaka Samhita. Cikitsasthana 15/221. p.525.
3. Ibid Charaka Samhita, Cikitsasthana 15/4, Chakrapani. p. 512.
4. Ibid Charaka Samhita, Cikitsasthana 13/9. p. 491.
5. Sushruta Samhita - Nibandhasangraha Commentary of Shri Dalhanacarya. Edited by Jadavaji Trikamji acarya. 7th ed. Varanasi: Chaukhamba Orientalia Varanasi; 2002.
6. Ibid Sushruta Samhita, Sutra Sthana 46/344, Dalhana. p. 238.
7. Ibid Charaka Samhita. Cikitsasthana 3/154-155. p. 410.
8. Ibid Charaka Samhita Vimanasthana 8/120, p. 280.
9. Ibid Sushruta Samhita Sutrasthana, 46/509. p. 251.
10. Ibid Charaka Samhita Vimana Sthana 2/7 p. 238.
11. Ibid Charaka Samhita Vimana Sthana 2/9, Chakrapani p. 239.
12. Vagbhata, Ashtanga Hrdaya with the commentaries, Sarvangasundara of Arundatta and Ayurveda Rasayana of Hemadri. edited by Pandit Hari Sadasiva Sastri Paradakara Bhisagacarya. Sutrasthana 4/21, Arundatta. Varanasi: Chaukhamba Orientalia; Reprint -2000. p.56.
13. Ibid Ashtanga Hrdaya Sutra Sthana 7/61. p. 142.
14. Ibid Charaka Samhita Vimana Sthana 1/24(8). p. 237.
15. Ibid Charaka Samhita, Sarira Sthana 1/57. p. 292.
16. Ibid Charaka Samhita, Sutra Sthana 26/42-4. p. 144.
17. Bhavaprakasa Nighantu - Hindi Commentary by Dr. K. C. Haritakyadi Varga/73, pg-24 Varanasi: Chunekar Chaukhamba Bharati Academy; Reprint 2002.
18. Ibid Ashtanga Hrdaya Sutrasthana 9/22, p. 170.
19. Ibid Charaka Samhita, Cikitsasthana 3/151-153. p. 410.
20. Available from: <http://www.divya.it/english/ayurveda/piante.html> [Last accessed on 2009 Mar 24].
21. Available from: <http://chestofbooks.com/health/materia-medica-drugs/Hindus-Materia-Medica/Piper-Chaba-Hunter-Sans.html> [Last accessed on 2009 Mar 24].
22. Available from: <http://www.stuartxchange.org/Sandikit.html> [Last accessed on 2009 Mar 24].
23. Available from: <http://www.bioinformation.net/003/002100032008.pdf> [Last accessed on 2009 Mar 24].
24. Available from: <http://chestofbooks.com/health/materia-medica-drugs/Pharmacology-Therapeutics-Prescription-Writing/Carminatives.html> [Last accessed on 2009 Mar 24].
25. Sara Hawker. Little Oxford English dictionary 9th ed. Database right. Oxford: Oxford University Press; 2009:29.

