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Access this article online
Website: www.ayujournal.org
DOI: 10.4103/0974-8520.77166
Quick Response Code:

Clinical Research

Comparative study of *Upavasa* and *Upavasa* with *Pachana* in the management of *Agnisada*

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Abstract

Ayurvedic management is not only concerned with the cure of the diseased person, but is also meant to maintain the health of the healthy person because it is used for *Dhatusamya*. *Langhana* is the prime tool in the process of *Dhatusamya*. In this research study, *Upavasa* plus *Pachana* and *Upavasa* (among ten types of *Langhanas*) are applied in two different groups, using the random sampling method. *Upavasa* is taken as *Hina Matra Bhojana* — that is, gradually increasing the dose of *Ahara* (by *Padanshika Krama*) was applied on the basis of the *Ahara Shakti* of the *Atura* and status of the *Agnisada*. Furthermore, for the *Pachana, Shunthi (Zingiber officinale)* was selected. The subjects for the study were patients who had signs and symptoms of *Agnisada* and were between the age group of 20 and 60 years. In Group A (*Upavasa* plus *Pachana*) 83.77% and in Group B (*Upavasa*) 72.97% improvement was found, which was statistically highly significant (< 0.001). *Upavasa* plus *Pachana* and *Upavasa* were both found beneficial in promoting the *Agni* in patients with *Agnisada*. However, in the percentage-wise comparison Group A showed better result than Group B.

Key words: *Langhana, Upavasa, Hinamatra Bhojana, Padamshika Krama*

Introduction

Every science has its own principles and these principles could not have been made up at once. The principles of *Ayurveda* are based on strict experimental studies of several years and are the outcome of those studies. Several *Acharyas* have tested these principles for many years and only after that they have been placed in the *Samhitas*. This process is needed for the establishment of the applied aspect of *Ayurveda* in the modern era.

Agni is the primary and most important component of the body. Any transformation in the body cannot occur without it. In the condition of the cessation of *Agni* one dies.[1] *Jathragnimandya* is an abnormal status of the *Annavaha Srotasa*, which is the initial condition of any disorder, and it is an accepted fact by all the writers that *Agnimandya* forms an integral part in the pathogenesis of each and every disease.[2] The definition of *Agnimandya* could be understood as the inhibited activity of the *Pachakagni* resulting in delayed or partial digestion or indigestion of food taken even in small measures at proper intervals and by the production of *Ama* and abnormal *Lakshana* related to the *Mahasrotasa* and having a tendency to affect the *Rogamarga*. Many synonyms were described in the *Samhitas* for *Agnimandya*, which are, *Agnisada*, *Durbalagni*, *Agnivadha*, *Hatanala*, *Agninasha*, and so on. Here, in this particular study, the *Agnisada* is taken among these synonyms. As per the dictionary meaning, *Sada* means sinking down / exhaustion / decay / loss. Hence, the meaning of *Agnisada* is exhaustion of *Agni* and the like. No direct reference had been found for the *Nidanas* of *Agnisada*, but the *Nidana* of *Asamyaka Pachana* of the *Ahara*, which is given by *Acharya Kashyapa*,[3] can be taken as the *Nidana* of *Agnisada*.

For the assessment of the status of *Agnisada* a special proforma was designed, wherein, the *Abhyavaharana Shakti* and *Jarana Shakti* of each individual patient were analyzed. For the *Abhyavaharana Shakti* the *Sarvagraha* and *Parigraha Ahara Matra* of the patients were calculated and for the *Jarana Shakti* the symptoms of the *Jirna Ahara Lakshana*, given by *Acharya Shusruta* in *Swasthvritta Adhyaya* of *Uttarasthan*, were taken as the criteria for assessment.

Ahara is stated to be a *Karana* of the *Sharira* as well as *Roga*;[4] hence, the treatment could also be with *Ahara*. He management of diseases in *Ayurveda* starts with the *Nidana Parivarjana*. In the *Ayurvedic* text, *Langhana* is stated to be the best treatment for *Santarpanotha Vyadhi*. Here, *Langhana* has been described under a broad aspect, and ten treatment modalities have been grouped under this umbrella. The definition of the *Langhana* is given as that which causes lightness of the body.[5] Here the *Upavasa* and *Pachana* types of *Langhanas* were compared by the scholar to understand

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the efficacy of both in the *Agnisada*. *Upavasa* may be full or partial, it also means *Ek kala Bhojana* or *Hina Matra bhojana* and so forth.

Here, in this research article, *Hina Matra Bhojana* is taken as *Langhana*. As *Acharya Sushruta* mentioned, in the patient with *Mandagni*, it is best to take *Ahara* that is less in quantity.[6] A special schedule for seven days was prepared for this study; and for these seven days, the *Padanshikakrama*[7] (gradual increase of the quantity of the *Ahara*) was applied. The results were evaluated, as per data found.

Aims and Objectives

1. To evaluate the efficacy of the *Langhana Upakrama* on the Digestive disorder, especially *Agnisada*.
2. To compare the efficacy of *Upavasa* and *Upavasa* along with *Pachana* in the management of *Agnisada*.

Materials and Methods

Conceptual material

1. For the conceptual study, various texts and journals had been referred.

Clinical material

1. Patients having classical signs and symptoms of *Agnisada* were selected from the inpatient department (IPD) and outpatient department (OPD) of the Basic Principles Department of I.P.G.T. and R.A., Jamnagar.
2. To assess the status of *Agnisada*, a specific research Proforma was developed on the basis of *Abhyavaharana Shakti* and *Jarana Shakti*.

Criteria for selection of patients

Patients between the age of 20 and 60 years, having classical symptoms of *Agnisada*, were selected.

Criteria for exclusion of the patients

1. Patients below 20 and above 60 years were excluded.
2. Patients with chronic debilitating diseases such as *Rajayakshama*, *Madhumeha*, hypertension, genetic disorders, and other acute systemic disorders had been excluded.

Design of Groups and Management

Group A —	Group B —
Upavasa + *Pachana*	*Upavasa* + *placebo*
Drug: *Shunthi* tablets (each containing 500 mg)	Drug: Roasted *Soji* tablets (each containing 500 mg)
Dose: Four tablets twice a day after meals	Dose: Four tablets twice a day after meals
Anupana: Luke warm water	*Anupana*: Luke warm water
Duration: Seven days	Duration: Seven days

The diet schedule given to the patients during treatment, where *Matra* of the *Ahara* was increased, was given for seven days. The patients were advised to fast on the first day and for next three meals, including lunch and dinner, one-fourth of this diet was given. For the next three meals half of the diet was given and for the three meals following, three-fourth of the diet was given. After this the following three meals consisted of the full diet.

Criteria of assessment

Total assessment criteria as per reduction in *Vyadhi bala*, *Samyaka Agni Deepana*, and Improvement in *Atura Bala:*

1. Cure 100%
2. Mild improvement > 75%
3. Moderate improvement > 50%
4. Improvement > 25%
5. Unchanged < 25%

The information gathered on the basis of the above-mentioned observations was subjected to statistical analysis in terms of mean (x), standard deviation (S.D.) and standard error (S.E.). The paired 't' test was carried out at $P < 0.05$, $P < 0.01$, and $P < 0.001$ levels. The obtained results were interpreted as:

Insignificant	$P > 0.05$
Significant	$P < 0.05$ or $P < 0.01$
Highly significant	< 0.001

Observations

A total of 59 patients were registered. In group A, 30 patients completed the treatment, while four patients Left Against Medical Advice (LAMA). In group B, 25 patients completed the treatment, while one patient LAMA. Among the 54 patients, 44.07 % were from the age group of 30 to 39 years. *Adhyashana* (55%), *Vishamashana* (36.67%), *Samashana* (30%), *Amatravata Bhojana* (50.85%), Irregular dietary habit (71.19%), habit of water intake after meal (83.05%), and *Atanmana Bhunjitam* (61.01%) were reported by the patients. In the *Sharirika Prakriti*-wise distribution, the maximum number of patients, that is, 25.42% had *Vata – Kapha Prakriti*.

In the *Nidana*-wise distribution, *AtiGuru Bhojana* was (47.46%); while *Atibhojana* and *Atisnigdha Bhojana* was found to be 50.85 and 40.86%, respectively. In the *Vihara*-wise distribution 55.93% patients had the habit of *Divaswapa* and 44.07% had the habit of *Ratri Jagarana*. In the *Manasika Nidana*-wise distribution *Chinta* was found in 69.49% of patients.

In the *Lakshana*-wise distribution, decreased *Abhyavaharaṇa Shakti* was found in all the patients, a decrease in *Kshudha*, *Klama Parigamana*, and *Kukshi Shaithilya* was found in 94.91, 88.14, and 83.05%, respectively. Decrease in *Utsaha* was found in 81.35% of the patients. *Asamyaka Mala Pravritti* was found in 81.35% of the patients. Among them thrice the *Mala Pravritti* and twice the *Mala Pravritti* was found in 16.95 and 23.73%, respectively. *Ayathakala Mala Pravritti* was found in 21.81% of the patients. However, a decrease in *Annashraddha* and *Deha Laghuta* was found in 76.27 and 72.88%. *Asamyaka Udgara*, *Vata*, and *Mura Pravritti* were found in 61.02, 57.63, and 45.76%, respectively. Chronicity of one to two months of the *Vyadhi* was found in 55.93% and a duration of 15 to 30 days was found in 45.76%.

Effect of therapy on *Lakshanas*

The effect of therapy on various lakshanas is shown in Figures 1(a) & (b). Table 1 shows that in the percentage-wise comparison of Group A and Group B, Group A showed better results than Group B. However, the '*t*' value of Group B was greater than that of Group A.

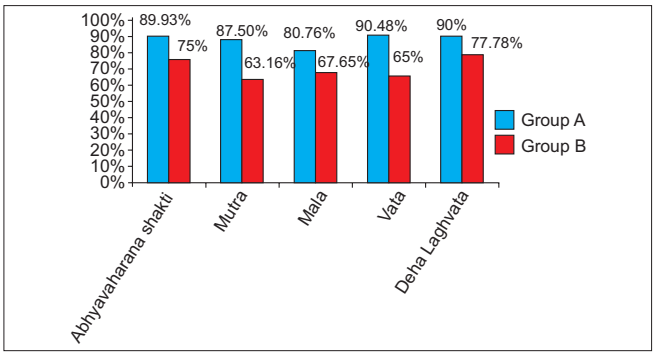

Figure 1a: Effect of therapy on *Lakshanas*

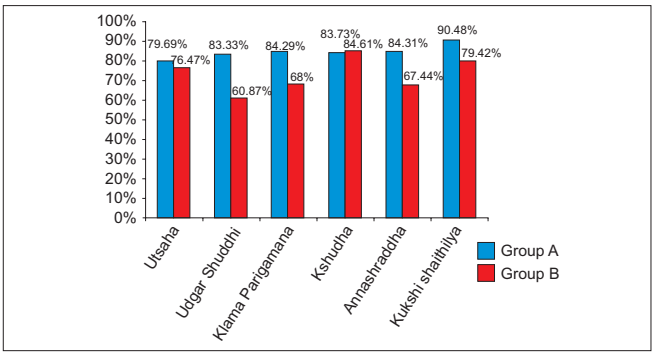

Figure 1b: Effect of therapy on *Lakshanas*

Table 1: Total effect of therapy

Total effect of therapy	No. of patients	(%) imp	BT mean Score	AT mean Score	*SD* (±)	*SE* (±)	*T*	*P* value
Group A	30	83.77	17.67	2.87	4.37	0.80	18.53	< 0.001
Group B	24	72.97	16.5	4.45	2.86	0.59	20.58	< 0.001

Discussion

Observations

The maximum number of patients, that is, 50.85% were taking *Amatravata Ahara*, which is called as "*Sarvadosha Prakopaka*";[12] *Adhyashana*(55%), *Vishamashana* (36.67%) *Samashana* (30%) was found. According to *Sushrutacharya* these three are "*Bahuvyadhikaraka*."[13]

The maximum number of patients (25.42%) had a *Vata-Kapha Prakriti*, and it was already mentioned in the *Charaka Samhita*, that the *Doshas* that are dominant in the formation of the *Prakriti* are more prone to vitiate immediately, than others.[14] Hence, the vitiation of *Vata* leads to *Agnivaishamya* and the vitiation of *Kapha* leads to *Agnisada*.

The maximum number of the patients (83.05%), had a habit of water intake after meal, which is "*Kapha Prada*" as per *Acharya Bhava Prakasha*,[15] which further leads to the vitiation of *Agni*.

The maximum number of patients had done *Diwaswapa* (55.93%) in their routine life. *Divaswapa* is *Kapha Prakopaka*, while *Ratrijagaraṇa* increases the *Vata*, which is the main cause of *Agnivaismya*, which may lead to *Agnisada*.

In the present study *Ayathakala Mala Pravritti* was found in 28.81%, which showed that the vitiated *Agni* directly affected the time period in which the Mala formation occurs. *Mala Pravritti* (23.73%) two to three times and more than three times (16.95%) indicates that in *Agnisada* the function of normal *Agni*, that is, *Sara* and *Kitta Vivecana* is vitiated, due to which the proper *Matra* of the *Mala* is not excreted at one time, hence, *Muhura – Muhura Mala Pravritti* occurs. Constipation is found in 8.47% of the patients and is due to *Krura Koṣṭha* (8.33%).

Both the groups statistically show highly significant results of *Mala Pravritti*, but Group A (80.76%) shows a better result than Group B (67.65%). *Shunthi* is said to be *Grahi* as well as *Vibandhanuta*. When the *Mala Pravritti* is more than two to three times, *Shunthi* being *Agni* dominant, it absorbs the excess *Apyamsha*. As a result it binds the *Mala*, which has excess fluid and gives the *Grahi* effect, and act as a *Vibandhanuta*, due to its *Prabhava*.[16]

In a percentage-wise comparison of both the groups, group A showed better result than group B, but the 't' value of Group B is greater than that of Group A. This is because the number of patients is not equal in both the groups.

In a percentage-wise comparison of both the groups, group A shows a better result than group B, the reason behind it is that in group A, the effect of *Deepana* (due to *Langhana*) and *Pachana* (due to *Shunthi*) are both present, while group B mainly has the *Deepana* (due to *Langhana*). In Group B only *Upavasa* is advised, whereas, in Group A *Upavasa* plus *Pachana* is advised. In both the Groups, an increasing quantity of food was given. Hence, a highly significant result was found in both the groups.

Mode of action of the *Upavasa*

Mode of action of the *Upavasa* can be understood in this manner: If *Agni* does not get fuel in the form of food, it starts digesting *Dosha*. *Agni* for its existence needs a constant feed of fuel. As a routine the food serves as the fuel. In the absence of food, in the preliminary stage *Agni* uses *Dosha* as fuel.[8] This special property of *Agni* is used as a treatment modality. The mode of action of the *Upavasa* can also be understood with the help of modern science. If the consumption of the glucose is decreased, the glycogen, then fat, and in the last stage, protein, is broken down for the supply of glucose to the tissue, which is similar to the view of *Ayurveda*.

Acharya Vagbhata has mentioned that *Langhana*
1) Decreases the Doshas
2) Increases the Agni
Hence it increases the *Swasthya*, *Kshudha*,*Trishna*, *Ruchi*, *Agnibala*, and *Oja*.[9]

Padamshika Krama

Food taken in optimum quantity is termed as *Matravat*.

Ayurveda believes that every human being is unique and different from others; hence the needs for everything are different from one to another. The hunger or the quantity of food needed also differs from one person to another. Therefore, it is not possible to decide a specific quantity of food that will be applicable to all. Besides the *Prakriti* of human beings, the nature of food items is also variable. Hence, the study of the Schedule of *Aharamatra* is prepared according to the capacity of food intake of an individual.

Why the *Padamshika Krama*? Here, in this research study, the increasing method of food was applied. The reason behind this is that by gradually decreasing the *Apathya* and gradually increasing the *Pathya*, the *Apathya* can be completely stopped, due to which the recurrence of the vitiated *Doshas* is avoided, and the good properties thus inculcated are sustained for a long time.[10]

Mode of action of the *Shunthi*

Shunthi is described in both *Deepaniya* and *Pachaniya Gana*; A *Panchana Dravya* performs the digestion of the *Ahara*, but does not increase the *Agni*.[11] In *Agnisada*, *Ama* (undigested food) is formed. *Shunthi* enters in this *Ama* and creates *Akasha* to make a path for *Agni* to enter and perform its function.

Conclusion

Drugs that stimulate the digestive power are dominant in *Agni* and *Vayu Mahabhutas*. Taking into consideration the total effect of therapy, Group A showed better result than Group B. Hence, it is concluded that the combined Langhana therapy, that is, *Upavasa* and *Pachana*, shows a better result than *Upavasa* only.

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हिन्दी सारांश

अग्निसाद में उपवास एवं उपवास–पाचन का तुलनात्मक अध्ययन

अमी राजाणी महेशकुमार व्यास हितेश व्यास

आयुर्वेदीय चिकित्सा मात्र रुग्ण तक सीमित न रहते हुए धातुसाम्य द्वारा स्वास्थ्य को भी बनाए रखती है। धातु साम्य के प्रयोजन को सिद्ध करनेवाला प्रधान साधन लंङ्घन ही है। इस अनुसन्धान कार्य में अग्निसाद के रुग्णों को लंङ्घन के तौर पर उपवास तथा पाचन (ग्रुप–अ), एवं केवल उपवास(ग्रुप–ब), ऐसे दो वर्गो में विभाजित किया। सुश्रुतोक्त सिद्धान्तानुसार उपवास से हीन मात्रा भोजन ग्रहण किया गया। पादांशिक क्रम के अनुसार क्रमशः आहार मात्रा वृद्धि आतुर बल एवं अग्निसाद की अवस्था के आधार पर की गयी, तथा पाचन औषध के रुप में शुण्ठि प्रयुक्त की गई। प्रायोगिक अध्ययन में २० से ६० वर्ष आयु वाले तथा अग्निसाद के शास्त्रोक्त लक्षणों वाले रुग्णों को समाविष्ट किया गया। ग्रुप अ में ८३.७७ % तथा ग्रुप – ब में ७२.७९ % लाक्षणिक लाभ प्राप्त हुआ, जो सांख्यिकीय विश्लेषण के अनुसार उच्च सार्थक परिणाम माना जाता है। उपवास + पाचन एवं केवल उपवास दोनो ही वर्ग अग्निसाद चिकित्सा हेतु लाभकारी दृष्टिगोचर हुए। लेकिन प्रतिशत के रुप में देखा जाए तो ग्रुप – अ के परिणाम, ग्रुप – ब की अपेक्षा अधिक उत्तम प्राप्त हुए।