

CLINICAL STUDY OF EFFICACY OF VATSAKADI YOGA WITH AND WITHOUT ANULOMAN IN PRAVAHIKA

Santosh Irayya Swami¹, Vrushali Vijay Dakhode²

¹Associate Professor, Dept. of Kayachikitsa, ²Associate Professor and Head of Department, Dept. of Panchakarma; MES Ayurved Mahavidyalaya, Ghanekhunt-Lote, Tal-Khed, Ratnagiri, Maharashtra, India

ABSTRACT

Today's busy scheduled and fast lifestyle is prone for many gastrointestinal disorders. People use to take fast food, junk food. Also due to lack of exercise and sedentary work, digestion tends to be hampered. Mental stress is also one of the main reasons behind it. *Pravahika* (Amoebiasis) is one of the major diseases of gastrointestinal tract. Due to *nityahetusevana* (aetiological factors), *Pravahika* recurrence is more although antibiotics are widely and routinely used for its management. In Ayurveda various modalities are given but *Anuloman* is described as *sampraptipratyanikupakrama* (to breakdown pathology) and *Vatsakadi yoga* is supposed to give major relief with respect to signs and symptoms of *Pravahika*. Aim of this study was to evaluate the efficacy of *Vatsakadi yoga* with and without *Anulomanin Pravahika*. It was an open randomized parallel group trial. Total 30 patients were treated out of which 15 patients were treated with *Anuloman (Ashwagolchoorna)* for four days followed by *Vatsakadi yoga* while 15 patients were treated with only *Vatsakadi yoga*. Individually both groups have given relief in cardinal signs and symptoms of *Pravahika*. While comparing, it was also statistically proved that *Anuloman* followed by *Vatskadi yoga* is more effective in the management of *Pravahika* than only *Vatsakadi yoga* with respect to signs and symptoms of *Pravahika*.

Keywords: *Pravahika*; Amoebiasis; *Vatsakadi yoga*; *Anuloman*; *Ashwagolchoorna*

INTRODUCTION

Today's life is busy scheduled and fast styled life. People do not have enough time to pay attention to their food and habits. They use to take fast food, junk food, ready food which is more oily, spicy and contaminated. Also use of cold drinks and carbonated beverages causes gastrointestinal upsets. Due to heavy physical and mental work they have more physical and mental stress and also disturbances in sleep. So they

suffer from variety of diseases esp. gastrointestinal disorders. *Pravahika* is one of these diseases. Prolonged and frequent use of antibiotics and other modern drugs acting on GI tract causes loss of appetite, acidity and many other side effects. I have seen many patients of *Pravahika* having better response to Ayurvedic treatment in our institute. *Pravahika* is described in Ayurvedic texts by various Acharyas. It is specially de-

scribed in *Sushrut Samhita*^[1] and *Ashtang Hridayam*^[2] It is included in *Kaphaja Atisara* by Acharya Charaka^[3] Various methods used in the treatment of *Pravaḥika* are; *Bheshaja*, *Basti* etc. Urgency and frequency of defaecation, *Sakaphamalapravrutti*, *Abdominal pain*, *Pravahanam (Tenesmus)*, *Krutepiakrutsaudnyata*, *Daurbalya*, *Aruchi*, *Avipak*, *Ghani*, *Angasad*^[4] are the symptoms observed in *Pravaḥika* *Anuloman* is described in *Pravaḥika* as a *Sampraptipratyanik Upakrama* (To breakdown pathology). *Vatsakadi yoga*^[5] is described in *Sushrut Samhita* (Uttar tantra 40/154). It may be correlated with Amoebiasis^[6,7,8] according to modern science.

Hence considering above facts this study was planned with aim and objectives to evaluate the efficacy of *Vatsakadi yoga* with and without *Anuloman* in the management of *Pravaḥika*.

Aim and Objectives: To evaluate the efficacy of *Vatsakadi yoga* with and without *Anuloman* in the management of *Pravaḥika*.

MATERIALS AND METHODS

Study population

Patients fulfilling the criteria for the diagnosis of the disease were registered for the present study between the age group of 10 to 50 years irrespective of sex, religion, occupation etc. 30 patients were selected from outpatient department of *Kayachikita*, S S N Jain Rugnalaya, Solapur. They were divided into two equal groups randomly.

Sample frame

- **Study design:** Randomized clinical trial
- **Sample size:** 30 patients (15 in each group)
- **Period of study:** 18 months

- **Selection of patients:** As per inclusion and exclusion criteria
- **Study setting:** S S N Jain Rugnalaya, Solapur, Maharashtra

Criteria for Diagnosis

The criteria of the diagnosis were mainly based on signs and symptoms of *Pravaḥika*. The detailed systemic examination was carried out. In support pathological examination like CBC and Stool examination were carried out for diagnosis and to ensure results.

Criteria for selection of patients

Inclusion criteria

Patients between the age group of 10 to 50 years having cardinal signs and symptoms like Urgency and frequency of defaecation, *Sakaphamalapravrutti*, *Abdominal pain*, *Pravahanam (Tenesmus)*, *Krutepiakrutsaudnyata*, *Daurbalya*, *Aruchi*, *Avipak*, *Ghani*, *Angasad* were selected for the study.

Exclusion criteria

Children below 10 years and old age above 50 years, patients with *Gudabhransha* (Rectal prolapse) and other chronic intestinal pathologies were excluded.

Laboratory Investigations

CBC, Stool examination and *Mala parikshanam*^[9] (according to Ayurveda)

Drug preparation

Ashwagolchoorna (*Plantago ovata*) available in S S N Jain Rasashala, Solapur was used as *Anuloman*. *Vatsakadi yoga* was prepared in the pharmacy of S S N Jain Rugnalaya, Solapur, by mixing equal parts of fine *choorna* of ingredients that means *Patha* (*Cissampelouepareira*), *Ajmoda* (*Carum roxburghianum*), *Kutaja* (*Holarrhena antidiysenterica*), *Shunthi* (*Zinziber officinale*), *Pippali* (*Piper longum*) and *Nilkamal* (*Nymphaea lotus*).

Drug intervention

Group A

Patients were treated with *Ashwagol choor-na* with a dose of 5gm per day at bed time with *anupan* of *koshnaja* for four days prior to start of *shaman* treatment. Then *Vatsakadi yoga* with the dose of 1gm thrice a day before meal with *anupan* of *koshnaja* for 35 days. First follow up was scheduled after 04 days and next Follow up on every 7th day was scheduled.

Group B

Patients were treated only with *Vatsakadi yoga* with the dose of 1gm thrice a day before meal with *anupan* of *koshnaja* for 35 days. Follow up on every 7th day was scheduled.

Criteria for Assessment

Both pre and post assessments of the patients were done on the basis of clinical symptoms^[10]-

- *Pravahanam*(Tenesmus)
- *MalapravruttiSamkhya / Vega* (Frequency of defaecation)
- *MalapravruttiMatra*(Stool quantity)
- *PureeshaSwaroop*(Consistency)
- *SashonitMalapravrutti*(Presence of blood in stool)
- *Udarshool*(Abdominal pain)
- *Agnimandya*(Loss of appetite)
- *Udarsparshasahatva*(Abdominal tenderness)

Assessment parameters Gradation with score:

- *Pravahanam*

Grade-(0) -No *Pravahana*

Grade-(+) -*Alpasashoolpravahana* with some quantity of *malala*(*Alpamalapravrutti*)

Grade-(++) - Tolerable *sashoolpravahana* with every *malapravrutti*

Grade-(+++) -Nontolerable *sashoolpravahana* with every *malapravrutti*

- *MalapravruttiSamkhya / Vega / Frequency of defaecation*

Grade-(0) -0,1 or 2 Daily

Grade-(+) -3 to 6 Daily

Grade-(++) -7 to 12 Daily

Grade-(+++) -13 or more than that-Daily

- *MalapravruttiMatra*

Grade-(0)- *Prakrut*

Grade-(+) - Less than *prakrut* but more than *alpamatra*

Grade-(++) - *Alpamatra*

Grade-(+++) - *Atyalpa* or no *pureesha* (only *kapha* present)

- *PureeshaSwaroop*(Consistency)

Grade-(0)- Without *shleshma / Prakrut*

Grade-(+)- *Sashleshmamalapravrutti* in some of the *vegas*

Grade-(++) - Every *vega* of *malapravrutti* is *sashleshma* but *shleshmaisalpa*

Grade-(+++) - Every *vega* of *malapravrutti* is *sashleshma* with more *shleshma* and *dalpapureesha*

- *SashonitMalapravrutti*(Presence of blood in stool)

Grade-(0) -Absence of *Rakta*

Grade-(+) -*Alpamatra* of *Rakta* present in some *vegas* of *malapravrutti*

Grade-(++) -*Alpamatra* of *Rakta* present in every *vegas* of *malapravrutti*

Grade-(+++) - *Bahumatra* of *Rakta* present in every *vegas* of *malapravrutti*

- *Udarshool / Abdominal pain*

Grade-(0)- No Abdominal pain

Grade-(+) - *Alpaudarshool* only at the time of *malapravrutti*

Grade-(++) - Tolerable *udarshool* present at the time of *malapravrutti* and between the two *vegas* of *malapravrutti*

Grade-(+++)- Persistent and no tolerable *udarshool* present. Worst at the time of evening *malapravrutti*

• **Agnimandya**

Grade- (0) - *Prakrut / Udarlaghavata* within 3 hours after meal

Grade- (+) - *Udarlaghavata* within 4 hours after meal

Grade- (++) - *Udarlaghavata* within 6 hours after meal

Grade-(+++) - No *Udarlaghavata* after meal

• **Udarsparshasahatva (Abdominal tenderness)**

Grade-(0) -Absent

Grade-(+) - Tenderness with *Atiudarpeedan*- Deep tenderness

Grade-(++) - Tenderness with *Alpaudarpeedan*-Superficial tenderness

Grade- (+++) - Severe tenderness. Patient do not allow to touch the abdomen

STATISTICAL ANALYSIS AND INTERPRETATION

The subjective criteria were assessed before treatment and after treatment. The data obtained in clinical study is subjected to statistical test and analyzed in two parts as;

1. Unpaired ‘t’ test applied for *malapravruttisamkhyā* (Frequency of defecation) ^[11]
2. Percentage of improvement in each parameter of each scale is calculated

Criteria for the Assessment of the total effect of the therapy

Statistical Analysis

Group	X	X ²	N	(X-X [*]) ²	S.D.	S.E.	T ₂₈
A	95	621	15	19.34	1.36	0.49	0.71
B	88	549	15	32.80			

At t₂₈d.f. the highest obtainable value of ‘t’ at 0.1% level of significance is 3.67 as found on reference to ‘t’ table.

Calculated ‘t’ value =0.71

Table ‘t’ value =3.67

Hence p<0.001

Thus we reject null hypothesis of no difference. Hence study is statistically significant. So there is no doubt that *Vatsakadi yoga* with and without *Anuloman* is highly effective.

Table 1: Showing percentage of the effect of treatments on Pravahanam

Group	Effect of treatment on Pravahanam
A	100%
B	93.33%

While comparing Group A with Group B on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in

Group A was 100% while in Group B it was 93.33% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving *Pravahana*.

Table 2: Showing percentage of the effect of treatments on Malapravrutti Samkhyā / Vega / Frequency of defaecation

Group	Effect of treatment on MalapravruttiSamkhyā/ Frequency of defaecation
A	100%

B	93.33%
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While comparing Group A with Group B on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 100% while in Group B it was

93.33% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving frequency of defecation.

Table 3: Showing percentage of the effect of treatments on MalapravruttiMatra

Group	Effect of treatment on <i>MalapravruttiMatra</i>
A	100%
B	73.33%

While comparing Group A with Group B on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 100% while in Group B it was

73.33% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving *Alpalpa-malapravrutti*

Table 4: Showing percentage of the effect of treatments on PureeshaSwaroop (Consistency)

Group	Effect of treatment on <i>PureeshaSwaroop (Consistency)</i>
A	100%
B	66.66%

While comparing Group A with Group B on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 100% while in Group B it was

66.66% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving *Sashleshma-malapravrutti*.

Table 5: Showing percentage of the effect of treatments on SashonitMalapravrutti (Presence of blood in stool)

Group	Effect of treatment on <i>SashonitMalapravrutti</i>
A	100%
B	100%

While comparing Group A with Group B on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 100% while in Group B it was

100% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving *Sashonitmal-apravrutti*.

Table 6: Showing percentage of the effect of treatments on Udarshool/ Abdominal pain

Group	Effect of treatment on <i>Udarshool</i>
A	100%
B	66.66%

While comparing Group A with Group B on the bases of % of efficacy of treatment after

the whole course of treatment it was analyzed that % of efficacy of treatment in

Group A was 100% while in Group B it was 66.66% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving *Udarshool*.

Table 7: Showing percentage of the effect of treatments on *Agnimandya*

Group	Effect of treatment on <i>Agnimandya</i>
A	80%
B	73.33%

While comparing Group A with Group B on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in

Group A was 80% while in Group B it was 73.33% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving *Agnimandya*.

Table 8: Showing percentage of the effect of treatments on *Udarsparshasahatva*(Abdominal tenderness)

Group	Effect of treatment on <i>Udarsparshasahatva</i>
A	100%
B	93.33%

While comparing Group A with Group B on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 100% while in Group B it was 93.33% which suggest that *Vatsakadi yoga* with *Anuloman* is more effective than only *Vatsakadi yoga* in relieving *Udarsparshasahatva*.

apavruttiSamkhya / Vega / Frequency of defaecation, MalapavruttiMatra, PureshaSwaroop (Consistency), Sashonit Malapavrutti (Presence of blood in stool), Udarshool / Abdominal pain, Agnimandya, Udarsparshasahatva (Abdominal tenderness) Vatsakadi yoga with and without *Anuloman* were found to be statistically and clinically effective in all parameters taken for assessment.

RESULTS AND DISCUSSION

As per the assessment criteria *Krutepi-AkrutSaudnyata, Pravahanam, Mal-*

Table 9: overall effect of therapy

GROUPS	IMPROVEMENT				
	No. of patients with complete remission	No. of Markedly improved patients (%)	No. of Moderately improved patients (%)	No. of Mildly improved patients (%)	No. of unchanged patients (%)
Group A	0	15(100%)	00(00%)	00(00%)	0
Group B	0	12(80%)	02(13.33%)	01(6.66%)	0

However considering overall results, as presented in table no. 8 we can see that *Vatsakadi yoga* (combination of *Patha, Ajmoda, Shunthi, Pippali, Kutaj and*

Nilkamal) with *Anuloman (Ashwagolchoor-na)* was found to be more effective in relieving signs and symptoms of *Pravaahika* as compared to *Vatsakadi yoga* alone.

Action of *Ashwagolchoorna* as *Anuloman* (purgative) in *Pravaḥika* is due to effect of not containing any nutritional part in it. It completely reaches into the large intestine and increases the amount of stool. It swells because it absorbs water in the intestine. So, that its amount is further increased. Because of increased amount/ quantity of stool, it stimulates large intestine and increases peristalsis movement. Thus in this way it helps to defecate the stool. Due to *snigdha* and *picchil* properties it reduces *antraruḥshata* and does *vranaropan karma*. It is proved that it inhibits growth of protozoa, absorbs its toxins and reduces *paka of sleshmadharakala*. Seeds are demulcent, cooling, diuretic, used in inflammatory conditions of mucous membrane of gastrointestinal tract, genitourinary tract, in chronic dysentery, diarrhoea and constipation (glossary of Indian medicinal plants, Dr, R. N. Chopra)^{13,14,15}

The probable reason why the combination of *Vatsakadi yoga* became more beneficial was the synergistic action of the contents. Drugs in the yoga have *Vataghna, Kaphaghna, Pittaghna, Deepan-Pachan, Amapachan, Shoolhar, Vatanuloman, Raktastambhan, Anuloman, Shothahar, Krimighna and Jwarraghna* properties^[12]. So when used *Vatsakadi yoga* as a main treatment with *Anuloman* it is more effective clinically as well as statistically.

CONCLUSIONS

Pravaḥika is one of the commonest diseases of *Annavaha* and *Pureeshvaha* srotasas (Gastro intestinal tract). It produces various signs and symptoms due to vitiation of mainly *Kledakkapha* and *Apan Vayu* with *anubandh* of *Pachak pitta*. It is *Ashukari* (acute) *vyadhi* (disease) producing excessive

weakness and *Rasakshaya* if not treated within proper time. Treatment responses of all the parameters were highly significant in experimental Group than Standard Group. *Ashwagolchoorna* as *Anuloman* is very effective to breakdown pathology and help to defecate the stool without *Pravaḥanam*. *Vatsakadi yoga* is combination of *Patha, Ajmoda, Shunthi, Pippali, Kutajand-Nilkamala* and synergistic action of this combination with *Anuloman* is more effective clinically and statistically in reducing signs and symptoms of *Pravaḥika* than only *Vatsakadi yoga*.

This study proves that *Anulomanchikitsa* described in various *Samhitas* is actually *sampraptipratyanika* and *Vatsakadi yoga*, described in *Sushrut Samhita*, is very beneficial for treatment of *Pravaḥika*.

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CORRESPONDING AUTHOR

Dr. Santosh I. Swami

Associate Professor,

Dept. of Kayachikitsa,

MES Ayurved Mahavidyalaya,

Ratnagiri, Maharashtra, India

Email:santoshswami2009@gmail.com

Source of Support: Nil

Conflict of Interest: None Declared