



# A Comparative Clinical Study To Evaluate The Efficacy Of Bilwamajjadi Yog And Nagaradya Churna In The Management Of Pravahika W.S.R. To Amoebic Dysentery

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## ABSTRACT:

Pravahika has been described as a disease of Annavaha and Purishvaha strotas. It is described with synonyms like Purisha kshaya, Nischaraka or Nissaraka, Bhimbisi etc. Due to unhygienic food and lifestyle etc. the Udakvaha Strotas along with KledakaKapha and Apana Vayu and Samana Vayu gets vitiated and causes Pravahika Vyadhi. Pravahika can be correlated with Amoebic Dysentery which is caused by Protozoan *Entamoeba Histolytica* cyst. The main objective of the study was to compare the Efficacy of Bilwamajjadi Yog and Nagardya Churna in Pravahika Vyadhi. **Methodology:** It's a comparative clinical study with pre and post-test design where in 40 patients of either sex diagnosed as Pravahika w.s.r to type 2 Amoebic Dysentery were selected and randomly assigned into two groups of 20 patients each. **Group A** were given Bilwamajjadi yoga 6gms twice daily before food with *koshna jala* for 14 days. **Group B** were given *Nagaradhy churna* 6gms twice daily before food with *Madhu, Tandulodaka* for 14 days. **Results:** Group A with Bilwamajjadi yoga is statistically highly significant on all parameters of Pravahika. Group B with Nagaradya Churna is statistically highly significant on all parameters of Pravahika. Average percentage of improvement of Group A is 57.08% which is greater than average percentage of improvement of Group B- 48.81%. Hence we conclude that effect observed in Group A Bilwamajjadi Yoga is more than Group B Nagaradya Churna in the

management of Pravahika.

**Key words:** Pravahika, Bilwamajjadi yog, Nagaradhya churna, Amoebic Dysentery

## INTRODUCTION:

Ayurveda being an ancient science serves the purpose of prevention of any disease from occurrence in healthy person by increasing immunity by healthy diet and lifestyle and curing the disease produced in diseased person. Ayurveda having eight branches of which Kayachikitsa being an important branch of all. The diseased state disturbs both the psychological and physical condition of person. Pravahika has been described as a disease of Annavaha and Purishvaha strotas. It is described with synonyms like Purisha kshya, Nischaraka or Nissaraka, Bhimbisi etc. Due to unhygienic food and lifestyle etc. the Udakvaha Strotas along with KledakaKapha and Apana Vayu and Samana Vayu gets vitiated and causes Pravahika Vyadhi<sup>1,2,3,4</sup>.

Pravahika can be correlated with Amoebic Dysentery which is caused by Protozoan *Entamoeba Histolytica cyst*<sup>5</sup>. Amoebiasis is one of the major causes of death in developing countries next to Malaria. The incidence rate of the disease is 11.4 per 1,00,000 persons as of 2014<sup>6</sup>. It is caused by the infection of the Protozoan *E. Histolytica*, because of the poor sanitation. It is cured by modern medicines but the recurrence rate tends the disease from acute to chronic form.

Ayurveda formulations provides almost complete cure and may avoid recurrence. Bilwamajjadi Yog contains *Bilwaphala majja churna, puran Guda, Lodhra churna, Tila taila, Maricha churna*<sup>7</sup> and Nagaradya Churna contains *Shunthi churna, Ativisha churna, Mustak churna, Dhatvapushpa churna, Rasanjana churna, Kutajtwaka churna, Indrayava Churna, Patha Churna, Bilwaphala majja churna and Katuki churna* as its formulation<sup>8</sup> has been effective on Pravahika as per classics. Hence the present study has been framed to find out an economical, effective treatment in the management of Pravahika.

## OBJECTIVES OF STUDY:

- ✓ To Evaluate the Efficacy of Bilwamajjadi Yog in Pravahika Vyadhi.
- ✓ To Evaluate the Efficacy of Nagardya Churna in Pravahika Vyadhi.
- ✓ To Compare the Efficacy of Bilwamajjadi Yog and Nagardya Churna in Pravahika Vyadhi.

## REVIEW OF LITERATURE:

In 40<sup>th</sup> Chapter of *Uttartantra Sushrut* noted the disease *Atisara*. He has also described six types of *Atisara* i.e. *Vataja, Pittaja, Kaphaja, Tridoshaja, Shokaja, Aamaja* and their pathogenesis, premonitory symptoms, prognosis etc. First of all *Sushrut* has enumerated *Pravahika* in the chapter *Atisara*. Credit goes to him for giving different entities describing its etiology, pathogenesis and *Vataja, Pittaja, Kaphaja* and *Raktaja* types.

*Kashyapa* has given references of *Pravahika* in the *Rogas of Dushtprajata*. In *Garbhinistri* chapter the causes of *Atisara* have been described. Instead of using word *Pravahika* he denoted the word “*Nirvahika*.”

The formulation of *Bilwamajjadi Yoga* has been described in *Bhaisajya Ratnavali*, Chapter 7<sup>th</sup> *Atisaradhikar* | *Pravahika Chikitsa*, shlok 121<sup>09</sup> and contains *Bilwaphala majja churna*, *puran Guda*, *Lodhra churna*, *Tila taila*, *Maricha churna*.

The formulation of *Nagaradya Churna* has been described in *Bhaisajya Ratnavali*, Chapter 8<sup>th</sup> *Grahani rogadohikar*, shlok 29-31<sup>10</sup> and contains *Shunthi churna*, *Ativisha churna*, *Mustak churna*, *Dhatvapushpa churna*, *Rasanjana churna*, *Kutajtwaka churna*, *Indrayava Churna*, *Patha Churna*, *Bilwaphala majja churna* and *Katuki churna*.

## MATERIALS AND METHODS

**Study design:** A Simple comparative clinical Prospective study and sampling technique is purposive or deliberate.

**Sample size and grouping:** 40 patients suffering from *Pravahika* were selected and divided into 2 groups, 20 patients in each group.

**Group A-** 20 patients were administered with *Bilwamajjadi yoga* for 14 days

**Group B-** 20 patients were administered with *Nagaradya Churna* for 14 days

### Source of Data:

Patient suffering from *Pravahika* were selected from *Kayachikitsa O.P.D* and *I.P.D.* of *R.G.E.S.A.M.C & Hospital Ron* after fulfilling the Inclusion and Exclusion criteria.

### Selection Criteria:

The cases were selected strictly as per the pre-set inclusion and exclusion criteria.

### Inclusion Criteria:

1. Patient between the age of 20 to 50 years.
2. Patients with the Signs and Symptoms of *Pravahika*.
3. Patients with positive microscopic stool examination for *Entamoeba histolytica* cysts and having the symptoms of Amoebiasis.

### Exclusion Criteria:

1. Patients below age of 20 years and above 50 years of age.
2. Pregnant and lactating women
3. Patient with severe dehydration.
4. Patients with the associated systemic disorders like Hypertension, Tuberculosis, Diabetes Mellitus, Malignancy & other complications.

**Criteria for diagnosis:**

Sign and Symptoms mentioned in Ayurvedic Texts of Pravahika:

- Pravahanam (Tenesmus)
- Malapravrutti Samkhya/Vega (Frequency of defecation)
- Malapravrutti Matra (Stool quantity)
- Pureesha Swaroop (Consistency)
- Sashonit Malapravrutti (Presence of blood in stool)
- Udarshool (Abdominal pain)
- Agnimandya (Loss of appetite)
- Udar sparshasahatva (Abdominal tenderness)

**Investigations:** For Diagnostic purpose

1. Hb%.
2. TLC.
3. ESR.
4. Blood Sugar.
5. Stool for Occult Blood and microscopic.

**INTERVENTIONS**

	<b>GROUP 1</b>	<b>GROUP 2</b>
<b>YOGA</b>	<b>BILWAMAJJADI YOG</b>	<b>NAGARADYA CHURNA</b>
<b>ANUPANA</b>	Koshna Jal	Madhu, Tandulodak
<b>DOSAGE</b>	1 Karsha (12 grams) in divided Doses per day before meal	1 Karsha (12 grams) in divided doses per day before meal
<b>DURATION</b>	14 Days	14 Days
<b>FOLLOW UP</b>	7 days	7 days

**ASSESSMENT OF THE RESULTS:**

The subjective and objective parameters of base line data to post medication were compared for assessment of the results. All the result was analysed statistically for 'p' value using paired - t test and Anova

**A SUBJECTIVE CRITERIAS:**

<b>1.Pravahanam</b>
Grade 0 - No Pravahana
Grade 1 - Alpa sashool pravahana with some quantity of mala (Alpa malapravrutti)
Grade 2 - Tolerable Sashool pravahan with every Malapravrutti
Grade 3 - Nontolerable Sashool pravahan with every Malapravrutti

<b>2.Malapravrutti Samkhya/Vega/Frequency of defecation</b>
Grade 0 - 0,1 or 2 Daily
Grade 1 -3 to 6 Daily
Grade 2 -7 to 12 Daily
Grade 3 -13 or more than that-Daily

<b>3.Malapravrutti Matra</b>
Grade 0 -Prakrut
Grade 1 -Less than Prakrut but more than alpamatra
Grade 2 -Alpamatra
Grade 3 -Atyalpa or no Pureesha (only Kapha present)

<b>4.Pureesha Swaroop (Consistency)</b>
Grade 0 -Without Shleshma / Prakrut
Grade 1 -Sashleshma malapravrutti in some of the Vegas
Grade 2 -Every Vega of Malapravrutti is Sashleshma but Shleshma is Alpa.
Grade 3 -Every Vega of Malapravrutti is Sashleshma with more Shleshma and Alpa pureesha.

<b>5.Sashonit Malapravrutti (Presence of blood in stool)</b>
Grade 0 -Absence of Rakta
Grade 1 -Alpa matra of Rakta present in some Vegas of Malapravrutti.
Grade 2 - Alpa matra of Rakta present in every Vegas of Malapravrutti.
Grade 3 - Bahu matra of Rakta present in every Vegas of Malapravrutti.

<b>6.Udarshool (Abdominal pain)</b>
Grade 0 -No Abdominal pain
Grade 1 -Alpa udarshool only at the time of Malappravutti
Grade 2 -Tolerable Udarshool present at the time of Malappravutti and between the two Vegas of Malappravutti.
Grade 3 - Persistent and nontolerable Udarshool present. Worst at the time of every Malappravutti.

<b>7.Agnimandya</b>
Grade 0 -Prakrut / Udarlaghavata within 3 hrs. after meal
Grade 1 - Udarlaghavata within 4 hrs. after meal
Grade 2 - Udarlaghavata within 6 hrs. after meal
Grade 3 - No Udarlaghavata after meal

## B OBJECTIVE CRITERIA:

<b>8.Udar sparshasahatva (Abdominal tenderness)</b>
Grade 0 -Absent
Grade 1 - Tenderness with Ati udarpeedan-Deep tenderness
Grade 2 - Tenderness with Alpa udarpeedan - Superficial tenderness
Grade 3 - Severe tenderness. Patient do not allow to touch the abdomen

## RESULTS:

### Comparison Between Group A and Group B

PARAMETER	GROUP	Mean	% of Improv.	T-Value	P-Value	Remarks
Pravahanam	A	1.7	62.96	3.94	<0.05	S
	B	1.1	42.3			
Malappravutti Samkhya	A	0.35	70	0.369	>0.05	NS
	B	0.4	88.8			
Malappravutti Matra	A	1.55	55.66	2.66	<0.05	S
	B	1.2	42.10			
Pureesha Swaroopa	A	1.05	29.57	1.45	>0.05	NS
	B	0.85	24.63			
Sashonita	A	1.25	78.12	3.13	<0.05	S

Malapravrutti	<b>B</b>	0.5	55.55			
Udarashoola	<b>A</b>	1.05	50	1.67	>0.05	<b>NS</b>
	<b>B</b>	0.75	35			
Agnimandhya	<b>A</b>	0.35	63.63	0.56	>0.05	<b>NS</b>
	<b>B</b>	0.25	55.55			
Udara sparsha asahatva	<b>A</b>	0.8	47.05	2.93	<0.05	<b>S</b>
	<b>B</b>	0.35	46.6			

For comparison between Group A and Group B, Un paired t test is used. From above table we can observe that P-Values for parameters Malapravrutti Samkhya, Pureesha Swaroopa, Udarashoola, and Agnimandhya are more than 0.05 indicate that there is no significant difference between Group A and Group B in the management of Pravahika.

Where as in the parameters Malapravrutti Matra, Pravahanam, Sashonita Malapravrutti and Udara Sparsha Asahatva P values are less than 0.05 which indicate that there is significant difference in the mean effect of both groups in the management of Pravahika.

Further we can observe that average percentage of improvement of Group A is 57.08% which is greater than average percentage of improvement of Group B- 48.81%. Hence we conclude that effect observed in Group A Bilwamajjadi Yoga is more than Group B Nagaradya Churna in the management of Pravahika.

### **Discussion on Effect of Treatment on Clinical Symptoms:**

#### **Pravahanam:**

According to statistical analysis both Group A and Group B have response on the parameter Pravahanam and both groups are significant as  $p < 0.001$ . On comparison between both groups it has shown significant difference. But Group A has shown better result than Group B. As Bilwamajjadi yoga might be more sangrahi guna in nature than Nagaradya churna.

#### **Malapravrutti Samkhya:**

According to statistical analysis both Group A and Group B have response on the parameter malapravrutti samkhya and both groups are significant as  $p < 0.01$ . On comparison between both groups it has shown insignificant difference in the effect. It suggests that both groups are statistically equally effective on malapravrutti samkhya.



**Malapravrutti Matra:**

According to statistical analysis both Group A and Group B have response on the parameter Malapravrutti Matra and both groups are significant as  $p < 0.001$ . But comparison between two groups has shown statistically significant difference as  $p < 0.05$ . It suggests that group A is more effective on Malapravrutti Matra than Group B. This might be because Group A Bilwamajjadi yoga contains more Bilwa than in Nagaradya churna which is the main drug to cause this effect.

**Pureesha swaroopa:**

According to statistical analysis both Group A and Group B have response on the parameter Pureesha swaroopa and both groups are significant as  $p < 0.001$ . But comparison between two groups has shown statistically insignificant results as  $p > 0.050$ . It suggests that both groups are equally effective on Pureesha swaroopa.

**Sashonita malapravrutti:**

According to statistical analysis both Group A and Group B have response on the parameter Sashonita malapravrutti and both groups are significant as  $p < 0.001$ . On comparison between both groups it has shown significant difference. Group A has shown better result than Group B. This might be due to the Rakta shamaka property of Lodhra which is an ingredient of Bilwamajjadi yoga.

**Udarashoola:**

According to statistical analysis both Group A and Group B have response on the parameter Udarashoola and both groups are significant as  $p < 0.01$ . On comparison between both groups it has shown insignificant difference. Both the groups are having same effect on the Udarashoola parameter statistically.

**Agnimandhya:**

According to statistical analysis both Group A and Group B have response on the parameter Agnimandhya as  $p < 0.05$ . On comparison both the groups were equally effective on this parameter as  $p < 0.05$ .

**Udara sparsha asahatva:**

According to statistical analysis both Group A and Group B have response on the parameter Udara sparsha asahatva and both groups are significant as  $p < 0.05$ . On comparison between both groups it showed significant difference. Group A has shown better result than Group B. This might be due to the drugs used in Bilwamajjadi yoga like Tila Taila, Purana Guda which have more snigdha, ushna and Vatahara properties.



**CONCLUSION:**

- On comparison, statistically there is no significant difference in the effect of Bilwamajjadi yoga and Nagaradya churna on the parameters Malapravrutti Samkhya, Pureesha swaroopa, Udarashoola, and Agnimandhya.
- Group A with Bilwamajjadi yoga was found to be statistically higher significant than Group B Nagaradya churna on the parameters Malapravrutti Matra, Pureesha swaroopa, Sashonita malapravrutti and Udara sparsha asahatva.
- Average percentage of improvement of Group A is 57.08% which is greater than average percentage of improvement of Group B- 48.81%. Hence we conclude that effect observed in Group A Bilwamajjadi Yoga is more than Group B Nagaradya Churna in the management of Pravahika.

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