A CLINICAL STUDY TO EVALUATE THE EFFECT OF BILVA TAILA MATRA BASTI IN MANAGEMENT OF IRRITABLE BOWEL SYNDROME (IBS)

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ABSTRACT

Irritable Bowel Syndrome is most common in its prevalence amongst all the functional gastrointestinal disease (FGID). There is yet no promising treatment available in modern medicine for IBS. Main symptoms of IBS includes abdominal discomfort, change in bowel habit, presence of mucous in stool and flatulence. Amongst which most of the complaints do clearly resemble the vitiation of Vata and the main site of disease is supposed to be that of large intestine which is the seat of Vata. So Matra Basti with the oil formulated with Grahi, Shothhara and Aampachak drugs has been chosen for the treatment module. 15 clinically diagnosed patients were selected from O.P.D / I.P.D of Panchakarma Dept. of Rishikul Campus, Haridwar and were administered with Bilva Taila Matra Basti for three consecutive sittings of 8 days along with interval of 8 days in between. Period of study was for 40 days along with follow up after one month. Assessment was done on the basis of Rome III criteria, Hamilton’s Score and Self-made criteria for assessing associated symptoms. Obtained results were analysed statistically and significance of results were evaluated (Graphpad Instat 3.10). There were significant result were obtained by use of Matra Basti in symptoms of IBS.

KEYWORDS: Irritable Bowel Syndrome, Bilva Taila Matra Basti, Rome III criteria, Hamilton’s score.
INTRODUCTION
Cost of life is very high due to which man is working like a machine. This irony of life has cost every one to put his mental peace on stake. This has resulted in development of functional diseases i.e. the diseases in which no organic or biochemical abnormality is present in the patient. FGID are defined as variable combinations of chronic or recurrent gastrointestinal symptoms attributed to all levels of the gastrointestinal tract that have no structural or biochemical explanation.

Of all the functional GI diseases, Irritable Bowel Syndrome (IBS) is among the most common one. It is a diagnosis of exclusion and supposed to be a psychosomatic illness. Main symptoms in patient suffering from IBS are abdominal discomfort, change in bowel frequency and presence of mucous in stool. Currently Rome III criteria is the most recent criteria being used for diagnosis of IBS. Irritable Bowel Syndrome is the disease that not only affects the digestive system of a person but it may also cause an overall ill effect on other systems of a person. In Ayurvedic view there is a clear derangement of Agni along with vitiation of Vata. Basti is supposed to be the best treatment for vitiated Vata and Taila is itself supposed to be best drug for pacifying vitiated Vata. As Matra Basti, is a type of Anuvaasan Basti, i.e. supposed to have Manah Prasadan property and Agni deepan property.

So Matra Basti of Bilva Taila had been chosen for present study. Drugs used to make oil are Til Taila formulated with Bilva, Dashmool, Vidang.

Unripened Bilva (Aegele marmelos) fruit is an important and main content used to make oil. Unripened Bilva fruit is Grahi (absorbant) in nature as well as digestant in property. The A. marmelos( Bilva) fruit pulp has been shown to have antiprotozoal activity in chronic dysentery condition accompanied by loose stool alternately with occasional constipation. The unripe fruit used in different formulation for treatment of chronic diarrhea. Dashmool is Tridoshahar and Shotha hara (anti inflammatory) in property and Vidang is Krimighna and pacifies Vata and Kapha in nature. As in IBS there is supposed to be involvement of enteric nervous system as processing of visceral pain is complex and involves both the Enteric Nervous System (ENS) and the Central Nervous System (CNS).
Aims and Objective
The aim and objective of the study is

- To study the conceptual basis of IBS and to understand its Ayurvedic view.
- To evaluate the effect of Bilva Taila Matra Basti in the management of IBS.

MATERIAL AND METHOD
Selection of patient
15 patients with symptoms suiting ROME III criteria of IBS were randomly selected irrespective of Age, gender, religion, from the O.P.D. / I.P.D. department of Panchakarma, Rishikul Campus, Haridwar.

(A) Criteria of Inclusion

- Patients with ROME III Criteria for diagnosis of IBS

*Rome Criteria for the Diagnosis of IBS*[^8]
Abdominal pain / Discomfort *
- Relieved with defecation
With change in stool passage and consistency
Difficult stool passage **
- Sense of incomplete evacuation
- Presence of mucus in stool
*Symptoms must have been present for > 12 week
**Two or more at least 25 % of the time (7-8 week)

- Normal laboratory values
- Subjects fit for Basti procedure.

(B) Exclusion Criteria

- Any organic pathology detected.
- IBD and Intestinal tuberculosis.
- Lactose deficiency diarrhoea.
- Malignancy.
- Subjects with uncontrolled metabolic diseases.
- Pregnancy.
- Subjects having anorectal diseases like fissure, fistula etc. for Basti group

[^8]: Rome Criteria for the Diagnosis of IBS
Plan of study and treatment

- Proforma compiled with detailed clinical history and physical exam of the patients.
- After confirming the diagnosis 15 patients were given the following treatment –

Interventions

- Drug : *Bilva Taila*
- Dose : 72 ml \[^9\]
- Route of administration : Anal
- Time of administration : in morning (after food)
- Duration of therapy : 3 sittings of 8 days with a *Parihaar Kaal* of 8 days after every sitting.( total days=40 days)

Patients were guided regarding *Pathya/Apathya* regimen.

Preparation of medicines

Taila was prepared by scholar under supervision of dept of Ras shastra.

Diet: Patients were kept on *vata shamaka pathya* food articles.

Criteria For Assessment

Clinical sign and symptoms of IBS acc. to ROME III criteria.

- Assessment the effect of the procedure according to the delay in the reappearance of the symptoms or absence of cardinal sign and symptoms of irritable bowel syndrome according to ROME III criteria along with the self-forming scale for the associated symptoms.
- Mental health of the patient had been assessed before and after the treatment. Improvement in Hamilton’s depression and Hamilton’s anxiety rating score was assessed

The obtained data were statistically analyzed.

**OBSERVATIONS, RESULTS AND DISCUSSION**

Most of the patients (53.33%) belonged to the 20 – 40 years age group [Table 1]. In this study 73.33% of them were males and 26.67% were females [Table 2]. In other studies of modern medicines, the incidence of this disease in females is more than that of males. Diet and stress (66.67%) is found to be the most important aggravating factor in most of the patients followed by that of anxiety(33.33%), work load (13.33%),drug and depression(6.67%)[Table3].
Abdominal pain/discomfort was reduced by 68.96% and this benefit was statistically highly significant, Constipation was reduced by 66.66% and this was also statistically highly significant, Diarrhoea was reduced by 53.84% and this too was statistically highly significant, Irregular bowel frequency having both Constipation and diarrhoea was reduced by 50%, this was statistically significant result, Mucous in stool was reduced by 90.00%, which was statistically a highly significant result, Complaint of flatulence was improved by 45.45% and it was also statistically highly significant[Table 4].

Sense of incomplete evacuation was decreased by 72% and it too was statistically highly significant, Complaint of dyspepsia was decreased by 66.66% and it was statistically significant.Complaint of heart burn was totally treated but as the no of patients presenting this complaint was very less so this result was statistically insignificant.[Table 5]

Hamilton’s depression rating scale was found to be improved in 39% of patient while Hamilton’s anxiety rating scale was found to be improved in 59% of patients. Results in case of Hamilton’s anxiety rating scale is statistically highly significant. [Table 6]

<table>
<thead>
<tr>
<th>AGE(yrs)</th>
<th>GROUP A</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>21-40</td>
<td>8</td>
<td>53.33</td>
</tr>
<tr>
<td>40-60</td>
<td>4</td>
<td>26.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GENDER</th>
<th>GROUP A</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALE</td>
<td>11</td>
<td>66.67</td>
</tr>
<tr>
<td>FEMALE</td>
<td>4</td>
<td>33.33</td>
</tr>
</tbody>
</table>

Table 3: Aggravating Factors

<table>
<thead>
<tr>
<th>AGGRAVATING FACTORS</th>
<th>GROUP A</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRUG</td>
<td>1</td>
<td>6.67</td>
</tr>
<tr>
<td>DIET</td>
<td>10</td>
<td>66.67</td>
</tr>
<tr>
<td>WORK LOAD</td>
<td>2</td>
<td>20.00</td>
</tr>
<tr>
<td>STRESS</td>
<td>10</td>
<td>66.67</td>
</tr>
<tr>
<td>ANXIETY</td>
<td>5</td>
<td>33.33</td>
</tr>
<tr>
<td>DEPRESSION</td>
<td>1</td>
<td>6.67</td>
</tr>
</tbody>
</table>
### Table 4: Effect On Symptoms (Group A - Bilva Taila Matra Basti)

<table>
<thead>
<tr>
<th>Chief Complaints</th>
<th>Mean Score</th>
<th>X</th>
<th>%</th>
<th>SD</th>
<th>SE</th>
<th>t</th>
<th>P</th>
<th>Wilcoxon’s p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain/discomfort (n=13)</td>
<td>2.23 .69</td>
<td>1.54</td>
<td>68.96</td>
<td>0.87</td>
<td>0.24</td>
<td>6.32</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Constipation (n=8)</td>
<td>2.25 .75</td>
<td>1.50</td>
<td>66.66</td>
<td>0.75</td>
<td>0.26</td>
<td>5.61</td>
<td>&lt;0.001</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Diarrhoea (n=13)</td>
<td>2.00 .92</td>
<td>1.08</td>
<td>53.84</td>
<td>0.64</td>
<td>0.17</td>
<td>6.06</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Both (n=6)</td>
<td>2.00 1.00</td>
<td>1.00</td>
<td>50%</td>
<td>0.63</td>
<td>0.26</td>
<td>3.87</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mucous (n=10)</td>
<td>2.00 0.2</td>
<td>1.80</td>
<td>90</td>
<td>0.42</td>
<td>0.13</td>
<td>13.5</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Flatulence (n=11)</td>
<td>2.00 1.09</td>
<td>0.91</td>
<td>45.45</td>
<td>0.30</td>
<td>0.90</td>
<td>10</td>
<td>&lt;0.001</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

### Table 5: Effect On Associated Symptoms (Group A - Bilva Taila Matra Basti)

<table>
<thead>
<tr>
<th>Associated Complaints</th>
<th>Mean Score</th>
<th>X</th>
<th>%</th>
<th>SD</th>
<th>SE</th>
<th>t</th>
<th>P</th>
<th>Wilcoxon’s p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of incomplete evacuation (n=12)</td>
<td>2.08 .58</td>
<td>1.50</td>
<td>72</td>
<td>0.79</td>
<td>0.23</td>
<td>6.51</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Dyspepsia (n=10)</td>
<td>1.5 .5</td>
<td>1.00</td>
<td>66.66</td>
<td>0.66</td>
<td>0.2108</td>
<td>4.74</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Heart burn (n=4)</td>
<td>1.25 0</td>
<td>1.25</td>
<td>100</td>
<td>0.5</td>
<td>0.25</td>
<td>5</td>
<td>&lt;0.05</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>

### Table 6: Effect On Hamilton’s Rating Score (Group A - Bilva Taila Matra Basti)

<table>
<thead>
<tr>
<th>HAMILTON’S SCALE</th>
<th>RATING</th>
<th>MEAN SCORE</th>
<th>X</th>
<th>%</th>
<th>SD</th>
<th>SE</th>
<th>T</th>
<th>P</th>
<th>Wilcoxon’s P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton’s Depression rating scale (n=15)</td>
<td>1.2</td>
<td>0.7</td>
<td>0.5</td>
<td>39</td>
<td>0.5</td>
<td>0.1</td>
<td>3.5</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Hamilton’s Anxiety rating scale (n=15)</td>
<td>1.8</td>
<td>0.7</td>
<td>1.1</td>
<td>59</td>
<td>0.6</td>
<td>0.2</td>
<td>7</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

**Probable mode of action of the therapy**

**Mode of action of drugs:**

Drugs used for making **Bilva Taila** are **Bilva, Dashmool, Vidanga Along With Til Taila**. The main properties of drug because of which **Bilva Taila** showed action on disease are:

- **Tridoshahara property**
  
  Leads to proper function of **Prana Vata, Samana Vata Apana Vata and Kledak Kaph**

- **Deepana - Pachana property**
  
  Improves the status of Agni & clear the obstructed channels

- **Grahi property**
  
  Act as binding of stool & Drava mala pravruti.

- **Vedanasthapana property**
  
  Relieved the abdominal pain.

- **Aam Pachaka property**
  
  Reduces the mucous & foul odour of stool.

- **Krimighna property**
  
  Checks the infection.
Til Taila is one of the best Vata Shamana Drug. Vata is found to be the main culprit for the vitiation of Agni. So Til Taila has been chosen for the Sneha

Constipation, diarrhoea, mucous and flatulence all are result of Aam generated in body. Basti is Agni Deepan in property, thus Matra Basti with Bilva Taila showed positive results for these complaints.

Manah Prasaad property and Medhya property of Matra Basti were found to be useful in treating depression and anxiety and other negative emotions.

In IBS patients, psychological disturbance and stress may results in hyper vigilance to body sensation at CNS level and visceral hypersensitivity at the GUT level. Antistress effect of Matra Basti may reduce the vigilance and sensitivity respectively. CNS depressant properties in addition to mood-elevating effects, it has several physiologic effects that may be beneficial in IBS. It may reduce hyper motility of gastrointestinal tract. Anti-nociceptive property check the recruitment of nociception as in IBS visceral hypersensitivity noted due to recruitment of nociception. Thus Matra Basti helps to countering the deleterious effect of psychological stress on intestinal tract.

CONCLUSION

On the basis of our clinical observation and discussion, it may be concluded that IBS was found in middle-aged people between 20 to 40 years of age. The results obtained may be attributed to the disease-modifying effect of the trial therapy by means of its anti-Vata, grahi and manah prasadak properties. Relief in all the signs and symptoms was found to be statistically significant except the relief in Hamilton’s depression rating score which was found to be non significant. On the basis of this study it can be concluded that the trial drug therapy i.e. Bilvadi Taila Matra Basti can be used as a way of treatment in the management of IBS patients who are trying to get treated by modern ways. There was no adverse drug reaction seen during the period of trial and it is a safe, convenient and effective measure for the treatment of patients suffering from IBS.

REFERENCES

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