The present study was done to evaluate the combined effect of Pippalyasava and Surana Vataka in the management of Grahani Roga with special reference to irritable bowel syndrome. Grahani Roga is one among the Mahagadas. Grahani is the seat of JatharAgni (digestive fire) and is supported and nourished by the strength of Agni. Drugs with Deepana (which enhances digestive power) and Pachana (digestive) qualities need to be used in treating the Grahani Roga. Pippalyasava and Surana Vataka are indicated in Grahani Roga. The ingredients of these two preparations are known to have the properties capable of correcting the Agni. Conditions like UdaraShoola (abdominal pain), Ajeerna (indigestion), Aruchi (anorexia), Adhmana (distention of abdomen), Alasya (fatigue), Vibaddha Mala Pravruthi and Abaddha Mala Pravruthi (irregular bowel habits) have been described under the heading of Grahani Roga. The present study is an outpatient based clinical trial with pre and post test design. 30 patients of Grahani Roga (IBS), Pippalyasava and Surana Vataka were given for 30 days and reviewed at the interval of 15 days during treatment. Patients between 16 – 60 years of age group were the inclusion criteria. Patients suffering from other systemic illnesses like diabetes mellitus, hypertension etc was excluded from the study. Total 32 patients are registered, out of which 30 patients completed the study and 2 patients discontinued the medicine in between. The overall effect of therapies showed that 81.9% improvement in symptoms. The combination of Pippalyasava and Surana Vataka have given statistically highly significant results, thus these drugs can be used effectively in the management of Grahani Roga.

Keywords: Grahani Roga, irritable bowel syndrome, Pippalyasava, Surana Vataka, Jatharagni

INTRODUCTION

“Rogaa: sarvepimandaagnou”- Grahani Roga is caused due to Mandagni (decreased digestive power). Grahani is the seat of Jatharagni and is supported and nourished by the strength of Agni. Agni is to be corrected in all stages of Grahani Roga. Grahani is situated above the Nabhi region and is supported and nourished by the strength of Agni. Normally, it receives the ingested food, which is retained by it by restraining the downward movement. After digestion it releases the food into the next Ashaya i.e. Pakvashaya. In abnormal conditions due to weakness of Agni, it gets vitiated and releases food in its undigested form.

Grahani Roga is a disease of great clinical relevance in the modern era because of its direct link with the improper food habits and stressful lifestyle of the present times. In modern parlance, this disease can
be understood under the context of irritable bowel syndrome (IBS). It is one of the leading health issues in the community.

As Grahani Roga is caused due to Agni Mandya, the main line of treatment is to correct the Agni Dushti by following Langhana and administering drugs which are Deepana and Pachana in action. Pippalyasava contains drugs which are predominantly Katu and Tikta in Rasa (taste), Laghu and Ruksha in Guna (property), Katu in Vipaka and Ushna in Virya (potency). They mainly act as Deepana and Pachana and thus correct the Agni Mandya and the Dusti of the Anna and Purishavaha Srotas. SuranaVataka is the other drug selected for the study. It also contains drugs which are Deepana–Pachana, Grahi and is specifically indicated in Grahani. The combination of Pippalyasava and SuranaVataka have been selected so as to gain a combined and potentiated effect on Grahani Roga by facilitating easy absorption and faster action of the drugs by targeting Agni Dushti as well as Srotodusthi in the Anna and Purishavaha Srotas. Hence this study is planned to evaluate the efficacy of above said combination.

**Objectives of the study:** To study the combined effect of Pippalyasava and SuranaVataka in the management of Grahani Roga with special reference to irritable bowel syndrome.

**MATERIALS AND METHODS**

**Source of data:** 30 established cases of Grahani Roga from outpatient and in-patient as well as cases referred by other physicians of other departments were included in this study.

**Diagnostic criteria:** The patients with the complaints of Grahani Roga i.e. Muhurbaddha or Drava Malapravruth, Aruchi, UdaraShoola, Vistambha, Praseka, Gourava etc. were selected for the study.

**Inclusion criteria:** Patients between 16 – 60 years of age group.

**Exclusion criteria:** Patients suffering from acute diarrhoea, intestinal tuberculosis, ulcerative colitis, gastric and peptic ulcer, diabetes mellitus, hypertension, other forms of colitis like Behcet's disease, collagenous colitis, colitis associated with significant complications like haemorrage, perforation, strictures, colonic cancer, toxic mega colon, haemolitisanaemia, and liver xerosis.

**Research design:** The clinical study was openlabel, single arm, with pre and post test design conducted at outpatient department level in teritary Ayurveda hospital located in district quarters in southern India. 30 patients of Grahani Roga, Pippalyasava and SuranaVataka were given for 30 days and reviewed at the interval of 15 days.

**Medicine 1 and dose:** Pippalyasava - 20 ml thrice a day after food

**Medicine 2 and dose:** SuranaVataka - 1 tablet (2 Gms each) along with Pippalyasava, thrice a day after food.

**Duration:** 1 month

**Assessment criteria:** Results were assessed on the basis of changes in the signs and symptoms of the disease as mentioned earlier.

**Statistical methods:** The present study is an outpatient based clinical trial with pre and post test design. The data collected during clinical study were tabulated and statistically analyzed using Student ‘t’ test. The changes observed with ‘p’ value less than 0.05 is considered as significant.

**Investigations:** Blood routine (Hb%, total leucocyte count, differential leucocyte
count, erythrocyte sedimentation rate), urine examination, serum alkaline phosphate.

**OBSERVATIONS**

**Status of patients of present study:** In the present study total 32 patients are registered, out of which 30 patients completed the study and 2 patients discontinued the medicine in between. **Socio-economic Status:** It was calculated by using Kuppuswamy socio-economic status scale. Among GrahaniRoga patients, maximum of 34.4% were belonging to upper lower economic class, 28.1% hailed from upper middle class, 21.9% were from lower middle class, 9.4% were from lower economic class, 28.1% hailed from upper lower economic class, 34.4% were belonging to upper lower economic class, 6.2% were semi-skilled workers, 6.2% were skilled workers, 6.2% were semi-professionals and 6.2% were unskilled workers. **Diet:** 68.8% were having mixed diet, the rest that is 31.2% were vegetarians. **Koshta:** Majority i.e. 71.9% patients were having Madhyama Koshta, 21.9% had MriduKoshta and 06.2% had KruraKoshta. **ShariraPrakruti:** Maximum 75% belonged to Vata-Pitta Prakruti, followed by Vata-KaphaPrakruti in 15.6% patients while 9.3% of patients had shown characteristic features of Pitta-KaphaPrakruti. **Agni:** In 84.4% cases Vishamagni was observed, in 12.5% cases Mandagni was observed, while in 3.1% Agni was found Tikshna.

**RESULTS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>N</th>
<th>Mean (±)</th>
<th>% of Change</th>
<th>S.D (±)</th>
<th>S.E (±)</th>
<th>T</th>
<th>P</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Muhurbaddha muhurdrava Malapravruhti</strong></td>
<td>30</td>
<td>1.77 ± 0.4</td>
<td>↓ 77.4</td>
<td>0.62 ± 0.11</td>
<td>12.17</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Apakva Malapavruthi</strong></td>
<td>30</td>
<td>1.62 ± 0.24</td>
<td>↓ 85.19</td>
<td>0.62 ± 0.11</td>
<td>11.95</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Dourgandhitha Malapavruthi</strong></td>
<td>30</td>
<td>1.28 ± 0.28</td>
<td>↓ 78.13</td>
<td>0.6 ± 0.11</td>
<td>9.01</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>MalaPicchilatha</strong></td>
<td>30</td>
<td>1.69 ± 0.72</td>
<td>↓ 57.4</td>
<td>0.68 ± 0.13</td>
<td>7.64</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Frequency of Mala</strong></td>
<td>30</td>
<td>1.5 ± 0.37</td>
<td>↓ 75.33</td>
<td>0.68 ± 0.12</td>
<td>9.01</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Udara Shoola</strong></td>
<td>30</td>
<td>1.86 ± 0.38</td>
<td>↓ 79.57</td>
<td>0.93 ± 0.2</td>
<td>7.287</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Udara Gourava</strong></td>
<td>30</td>
<td>1.44 ± 0.22</td>
<td>↓ 84.72</td>
<td>0.67 ± 0.22</td>
<td>5.5</td>
<td>0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Sharira Gourava</strong></td>
<td>30</td>
<td>1 ± 0.00</td>
<td>↓ 100</td>
<td>0.00 ± 0.00</td>
<td>-</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Praseka</strong></td>
<td>30</td>
<td>1.00 ± 0.00</td>
<td>↓ 100</td>
<td>1.41 ± 1.00</td>
<td>1.00</td>
<td>&gt;0.05</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td><strong>Vishtambha</strong></td>
<td>30</td>
<td>1.53 ± 0.33</td>
<td>↓ 78.43</td>
<td>0.56 ± 0.15</td>
<td>8.29</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Atopa</strong></td>
<td>30</td>
<td>1.5 ± 0.00</td>
<td>↓ 100</td>
<td>0.62 ± 0.15</td>
<td>10.29</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Aruchi</strong></td>
<td>30</td>
<td>1.17 ± 0.08</td>
<td>↓ 93.16</td>
<td>0.5 ± 0.1</td>
<td>10.54</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Ajeerna</strong></td>
<td>30</td>
<td>1.9 ± 0.87</td>
<td>↓ 54.21</td>
<td>0.56 ± 0.1</td>
<td>10.18</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Alasya</strong></td>
<td>30</td>
<td>1.57 ± 0.39</td>
<td>↓ 75.16</td>
<td>0.72 ± 0.15</td>
<td>7.85</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td><strong>Vidaha</strong></td>
<td>30</td>
<td>1.46 ± 0.15</td>
<td>↓ 89.73</td>
<td>0.63 ± 0.18</td>
<td>7.48</td>
<td>&lt;0.001</td>
<td>HS</td>
<td></td>
</tr>
</tbody>
</table>

HS-highly significant, NS- Not significant.

**DISCUSSION**

**Conceptual discussion on disease:**

GrahaniRoga: GrahaniRoga is discussed as an independent disease and considered as Maharoga. Grahani is Ashraya and Agni is Ashrita and due to various etiological factors
the functions of *Grahanī* becomes impaired as a result of vitiation of *Pachaka Pitta*, *SamanaVayu* and *Kledaka Kapha*. In the logical outcome of *GrahanīRoga*, firstly there is maldigestion of ingested food which results in the production of *Ama* and secondly Malabsorption of the product of digestion. There is no common opinion regarding the correlations of *GrahanīRoga* with any of the particular disease entity described in modern medicine. Here the disease entity pertaining to gastrointestinal tract which are comparable with *GrahanīRoga* are discussed.

**Clinical Presentation of Irritable bowel syndrome:** IBS is characterized by abdominal pain, indigestion, abdominal distension, gastro esophageal reflex, fatigue, anorexia and altered bowel habits, including diarrhoea, constipation, or alternating diarrhoea and constipation. Symptoms are typically intermittent but may be continuous and should be present for at least 3 months before a diagnosis of IBS is considered. Patients with IBS may have symptoms referable to upper gastrointestinal tract including non-cardiac chest pain, heart burn, dysphagia and globus sensation, fatigue, urologic dysfunction and gynecological complaints.

**Drug discussion**

*Pippalyasava:* *Pippalyasava* was selected as trial drug for the present study. The preparation has drugs viz. *Pippali, Maricha, Chavya, Haridra, Chitraka, Ghana, Vidanga, Kramuka, Lodhra, Patha, Amlaki, Elavaluka, Usheera, Chandana, Kushta, Lavanga, Tagara, JatAmamsi, Tvak, Patra, Ela, Priyangu, Nagakesara, Dhataki and Draksha.*

*SuranaVataka:* *SuranaVataka* was selected as other trial drug. The preparation has drugs viz. *Surana, Vruddhadaru, Chitraka, Musali, Bhallathaka, Haritaki, Vibhitaki, Amlaki, Pippali, Pippalimoola, Shunti, Vidanga, Tvak, Talisa, Ela, Maricha and Guda.*

**Discussion on observations of the study:**

**General observation:** The observations reported in 32 patients are being discussed below.

**Diet:** Majority of patients i.e. 68.8% were having mixed type of diet. Improper and excessive intake of salt, sour, fried and oily food causes *AgniDushti* which leads to *GrahanīRoga*.

**Koshta:** In the present clinical study, 100% of patients were having unsatisfactory bowel habits. Majority i.e. 71.9% patients were having *MadhyaKoshta*, followed by 21.9% of patients were having *MriduKoshta*. The patients of *GrahanīRoga* are more prone to recurrent diarrhea.

**Agni:** In the present clinical study, highest number of patients i.e. 84.4% had *Vishamagni*, followed by 12.5% of *Mandagni*. *Vishamagni* is due to the vitiation of *Vata*, and this signifies the importance of *Vata Dosha* in the pathogenesis.

**Etiological Factors:** *Aharaja Nidana:* *Ati Katu Aahara, Ati Snigdha Aahara, Asatmya Bhojana, Ati Guru Bhojana, Ati Vidahi Bhojana* was observed in majority of patients like excess intake of pickle, fried non vegetarian diet, fast food etc. Maximum patients were having faulty Dietetic habits. This is responsible for vitiation of *Dosha* which leads to *AgniDushti* and Formation of *Ama*, which leads to disease occurrence.

ViharajaNidana: *Divā svapna, Ratri jagarana* and *Ati Vyayama* were found in some patients. These all things are responsible for improper digestion and
vitiation of Doshas, leading to Amavastha and finally leading to GrahaniRoga. 

Involvement of Srotas:
Annavaha Sroto Dushti Lakshana: Among Annavaha Sroto Dushki Lakshanas, Avipaka was found in 6.2% patients. Arochaka was found in 9.4% patients, UdaraShoola was observed in 53.1% patients, Adhmana was found in 28.1% patients, Amlaudgara in 18.8% patients, HrudayaUparodha in 3.1% patients, Pipasa in 6.2% patients, Chardi in 3.1% patients, Anaadvesha in 6.2% patients, Vishama kshudha in 65.6% patients, Anannabhilasha in 9.4% patients and Kanda daha was found in 36.2% patients. It signifies involvement of Annavaha Srotas in Pathogenesis of the disease.

Purishavaha Sroto Dushki Lakshana:
Muhurbaddha muhur Drava Malapraavruhti was observed in all patients. KukshiShoola was found in 28.2% patients. AdhoVataAtipravruhti in 9.3% patients, Gourava was found in 6.2% patients, Saama Mala Pravruhti was observed in 100% patients, Adhovata Sanga was observed in 3.1% patients where as Atisara was found in 37.5% patients. It signifies involvement of Purishavaha Srotas in Pathogenesis of the disease occurrence. These Srotas are related with digestion, absorption and excretion. Hence it can be summarized that in GrahaniRoga the predominantly involved Srotas are Annavaha and Purishavaha Srotas.

Probable mode of action of Pippalysava and SuranaVataka on treating the symptoms:
Muhurbaddha muhurdhra Malapraavruhti was found as chief complaint in 100% patients. The drugs like Chitraka, Maricha, Ghana (Mustha), Kramuka, Lodhra, Patha, Nagakesara, Dhathaki, Vibhithaki, Surana, Bhallathaka, and Shunti are having Deepana, Pachana and Grahi action and directly indicated in diseases like Atisara, Pravahiaka and Grahani. Properties like Katu, Tikta, Madhura Rasa, Laghu, Ruksha and Tikshna Gunas acts as Amapachaka and Agnideepaka also KashayaRasa and Snidha, Guru Gunas and Grahi action help in reducing the colonic motility and finally it helps in treating Muhurbaddha muhurdhara Mala Pravruhti. Apakva Malapraavruhti was found in 96.9% patients. By the Agnideepana and Pachanaproperties and by Laghu, Ruksha & Tikshna Gunas of drug it enters into Sukshma Srotas and clears Ama from Srotas. Here Pachana is the treatment principle described in the classics. Picchila and Dourgandhitha Malapraavruhti was found as chief complaints in 100% patients. The drugs having TiktaRasa and Laghu, Ruksha Gunas may help in reducing the colonic motility and thereby help in treating Picchila and Dourgandhitha Mala Pravruhti. UdaraShoola was found in 68.8% patients. The drugs, Surana, Pippali, Maricha, Chitraka, Vidanga, Patha, Amlaki, Lavanga, Ela, Kushta and Shunti are having Shoolahara properties. Udara Gourava was found in 40.6% patients. Sharira Gourava was present in 40.6% patients. Most of the drugs may be acted as Kapha Vatahara by its properties like Katu-Tikta-Madhura Rasa and Ushna Veerya.Vishtambha was found in 53.1% patients. Atopa was found in 62.5% patients. Vidanga, Shunti, Pippalimoola and Lavanga are the ingredients of the preparations which are capable of treating these conditions. These preparations are beneficial in managing the Amashayagatha and PakvashayagathaVata. Alasya was found in 78.1% patients. Triphala,
Bhallathaka, Pippali, Maricha, Tvak, Draksha, Vruddhadaru and Musali are having Balya, Vrushya and Rasayana actions may help in treating this condition along with Agnideepaka property. Vidaha was noticed in 51.52% patients. In this condition there may be increase in the Snigdha and Ushna Guna of Pitta along with increase in Dravamsha associated with Urdhvagama of Vata. As the drugs are having Laghu-Ruksha Guna and Tikta Rasa along with the drugs which are having Vathanulomaka properties may help to tackle this condition.

Effect on Manasika Vikara: Any disturbance in the Sharira affects the Manas and any disturbance of the Manas will affect the Sharira too because of the inseparable relationship between them. In the present study Majority of patients i.e. 59.3% were having Chintha / Shoka. As the preparations contain Jatamansi, Tagara, Ghana and Amlaki may directly help to treat such ManasikaVikaras with their Medhya, Balya and Rasayana effect. Ajeerna was found as chief complaint in 100% patients. Aruchi was found in 78.1% patients. Talisa, Patra and Tvak are having Ruchya action. Because of Katu-Tikta Rasa, Laghu-Ruksha-Tikshna Guna, Ushna Virya and Katu Vipaka the drugs have an action on Jatharagni. With the same time, because of the specific action of Pippalyasava and Surana Vataka, it is supported to act on Grahani too. So, these preparations regulate Jatharagni and the functions of Grahani and ultimately curing ‘GrahaniRoga’.

CONCLUSION

The overall effect of therapies showed 81.9% improvement in symptoms. There is no any adverse reaction found with these drugs. Administration of medicines in longer duration is needed for better results. The combination of Pippalyasava and Surana Vataka has given statistically highly significant results. Thus it can be concluded that these medicines are effective in the management of VataKaphaja GrahaniRoga.

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