ABSTRACT

Background: Acharya Sushruta has described aetiology and management of Parikartika in details. Signs and symptoms of the disease fissure-in-ano can be co-related with Parikartika according to Ayurveda. There is sharp cutting pain in anal region. In Parikartika, Teevra shooola, bleeding is seen sometimes with stool or after defecation, similarly pain and creepy blood discharge are seen in Fissure-in-ano. Objective: To assess the efficiency of Kasisadi Ghruta local application and to compare the efficacy of Kasisadi Ghruta and Jatyadi Tail in the Management of Parikartika with special reference to fissure-in-ano. Methods: The patient having classical signs and symptoms of Parikartika (fissure in ano) having Age group – 20 to 60 years was included in the study. Experimental group was treated with Kasisadi Ghruta and Control group treated with Jatyadi Tail. Patients were advised to apply locally at the site of fissure in ano for 28 days. Results & Conclusion: Kasisadi Ghruta and Jatyadi tail are highly significant in symptoms Kartanavat Vedana, Bleeding per rectum, Itching in anus, Burning, Discharge, Inflammations, Tenderness, Sphincter spasm except Sentinel tags. Kasisadi Ghruta and Jatyadi tail found equally effective in Fissure-in-ano. Keywords: Parikartika, Vedanasthapana, Shothahara, Ropana Kasisadi Ghruta.
complications or it might recur. According to Acahrya Charaka and Vagbhat, there is good treatment of Parikartika in details. There are several oral medicine and local oil or ghrut which having healing properties.6,7

In this study, Jatyadi Taila8 mentioned by Acharya Sharangdhara and Kasisadi Ghruta9 mentioned by Acharya Sushrut were used to evaluate and compare the result of local application in fissure in ano.

OBJECTIVE:
1. To evaluate the efficacy of Kasisadi Ghruta in the management of fissure –in– ano.
2. To compare the efficacy of local application of Kasisadi Ghruta and Jatyadi Tail in the Management of Parikartika with special reference to fissure-in-ano.

MATERIALS & METHODS:
Study design: Intervenational, open-labelled clinical trial.

Sample size: Total 60 patients of fissure in ano were registered randomly in two groups, viz. Experimental and control.

Patients with classical sign and symptoms of Parikartika (fissure-in-ano) visiting O.P.D. Dept of Shalya Tanta Department of M.S. Ayurveda Hospital, Gondia were selected.

MATERIALS:
Kasisadi Ghruta:

Ingredients of Kasisadi Ghruta
1) Shudha Kasisa  
2) Katuki Mula 
3) Jati Mula 
4) Haridra 
5) Goghruta

Ingredients of Jatyadi Taila
1) Jati Patra 
2) Nimba Patra 
3) Patola Patra 
4) Naktamala Patra 
5) Siktha 
6) Madhuka 
7) Kustha 
8) Nisa 
9) Katurhini 
10) Manjistha 
11) Padmaka 
12) Lodhra 
13) Abhaya 
14) Neelam 
15) Utpala 
16) Tuttha 
17) Sariva 
18) Naktamala Beeja 
19) Tila Taila 
20) Jala

Drug administration: Local application of Kasisadi Ghruta were given in experimental group while control was treated with Jatyadi Tail for the period of 28 days. Patients were advised properly the procedure of application, 20 ml bottle of medicine along with rubber catheter were provided to the patients.

CRITERIA OF SELECTION:
Inclusion Criteria
The patient having classical signs and symptoms of fissure in ano having Age group – 20 to 60 years were registered in this study from Shalyatantra OPD of M.S. Ayurveda College & hospital, Gondia.

Exclusion Criteria
Patients suffering from fissure – in – ano due to any secondary cause, Perianal Abscess, Chronic Fissure.

Ethical Clearance: Institutional ethics committee approval was received before start of this clinical Experimental

Inform consent: A well written informed consent was obtained from all the
participants explaining the details about 
the treatments given.

**Method of assessment:**

1. **Assessment of pain: Kartanavat Vedana**
   - No Pain at rest 0
   - Pain at rest, mild tolerable pain while walking 1
   - Mild pain at rest, moderate tolerable pain at walking 2
   - Disturbances of sleep due to pain, severe pain while walking 3
   - Severe pain at rest, patients’ needs medicine for relief 4

2. **Bleeding per rectum:**
   - No bleeding 0
   - Bleeding with stool strip 1
   - Bleeding and required flush in latrine 2
   - Massive bleeding 3

3. **Itching in anus**
   - No itching 0
   - Itching only when defecation 1
   - Itching after defecation 2
   - Itching occasionally during whole day. 3
   - Frequent itching during whole day. 4

4. **Burning**
   - No Burning 0
   - Burning only when defecation 1
   - Burning after defecation 2
   - Frequent Burning during whole day. 3

5. **Discharge**
   - Absent 0
   - Present 1

6. **Sentinel tags**
   - Absent 0
   - Present 1

7. **Inflammations**
   - No inflammation 0
   - Slight inflammation 1
   - Moderate inflammation 2
   - Severe inflammation 3

8. **Tenderness**
   - No tenderness. 0
   - Subjective experience of tenderness. 1
   - Moving on pressure. 2
   - Extremely oppose on touching. 3

9. **Sphincter spasm**
   - Normal sphincter 0
   - Very slight spasm 1
   - Moderate spasm 2
   - Very intense spasm 3

**Results:** After complete examination treatment was started while patients were assigned randomly in two groups. Experimental group was treated with Kasisadi Ghrita while Control was treated with Jatyadi Tail twice a day local application for 28 days. The subjective assessment was made before and after the treatment on scoring of signs and symptoms of Parikartika (Fissure-in-ano). For the analysis of subjective criteria in Experimental and Control group, Wilcoxon Signed Rank Test was applied for Symptom score of Fissure-in-ano.

### Table No.1 Wilcoxon Signed Rank Test of Symptoms in Experimental Group:

<table>
<thead>
<tr>
<th>No</th>
<th>Symptoms</th>
<th>Mean ± SD</th>
<th>Median</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT</td>
<td>AT</td>
<td>BT</td>
</tr>
<tr>
<td>1</td>
<td>Kartanavat Vedana</td>
<td>1.70±1.26</td>
<td>0.56±0.62</td>
<td>2.0</td>
</tr>
<tr>
<td>2</td>
<td>Bleeding per rectum</td>
<td>1.26±0.86</td>
<td>0.40±0.49</td>
<td>1.0</td>
</tr>
<tr>
<td>3</td>
<td>Itching in anus</td>
<td>1.4±1.22</td>
<td>0.43±0.62</td>
<td>1.5</td>
</tr>
</tbody>
</table>
In Experimental Group, regarding symptom Kartanavat Vedana, Bleeding per rectum, itching in anus, Burning, Discharge, Inflammations, Tenderness was statistically considerably highly significant in before and after treatment gradation as p value observed was <0.05 (p<0.001). However, in parameter Sentinel tags there is no significant difference observed after treatment as p value observed was >0.05.

Table No.2 Wilcoxon Signed Rank Test of Symptoms in Control Group:

<table>
<thead>
<tr>
<th>No</th>
<th>Symptoms</th>
<th>Mean ± SD</th>
<th>Median</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT</td>
<td>AT</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Kartanavat Vedana</td>
<td>2.00±1.01</td>
<td>0.73±0.63</td>
<td>2.0 1.0</td>
</tr>
<tr>
<td>2</td>
<td>Bleeding per rectum</td>
<td>1.20±0.84</td>
<td>0.36±0.49</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>3</td>
<td>Itching in anus</td>
<td>1.36±0.96</td>
<td>0.43±0.62</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>4</td>
<td>Burning</td>
<td>1.06±0.78</td>
<td>0.36±0.55</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>5</td>
<td>Discharge</td>
<td>0.63±0.49</td>
<td>0.26±0.44</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>6</td>
<td>Sentinel tags</td>
<td>0.53±0.50</td>
<td>0.40±0.49</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>7</td>
<td>Inflammations</td>
<td>0.76±0.67</td>
<td>0.23±0.43</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>8</td>
<td>Tenderness</td>
<td>1.10±0.92</td>
<td>0.36±0.55</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>9</td>
<td>Sphincter spasm</td>
<td>1.10±0.80</td>
<td>0.46±0.57</td>
<td>1.0 0.0</td>
</tr>
</tbody>
</table>

In Control Group, regarding symptom Kartanavat Vedana, Bleeding per rectum, itching in anus, Burning, Discharge, Inflammations, Tenderness, Sphincter spasm the p value obtained was <0.005 which was statistically considerably highly significant (p<0.001). However, in parameter Sentinel tags there is no significant difference observed after treatment as p value observed was >0.05.

Table No. 3 Comparison between Two Group w.r.t Symptoms Score of 60 Patients in Fissure-in-ano.

<table>
<thead>
<tr>
<th>No</th>
<th>Symptoms</th>
<th>Mean ± SD</th>
<th>Sum of Rank</th>
<th>Test static</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gr-A</td>
<td>Gr-B</td>
<td>Gr-A</td>
<td>Gr-B</td>
</tr>
<tr>
<td>1</td>
<td>Kartanavat Vedana</td>
<td>1.13±1.04</td>
<td>1.26±0.78</td>
<td>859</td>
<td>971</td>
</tr>
</tbody>
</table>
Mamta Gopalsrao Mate et al.: Comparative Study of Kasisadi Ghrita and Jatyadi Tail in the Management of Parikartika With Special Reference To Fissure-in-ANO

Comparison between Two Group w.r.t Symptoms Score: The Difference between before treatment and after treatment score of both groups compared by ‘Mann-Whitney U Test’. It was found that the sum of rank of experimental group for the symptom Kartanavat Vedana was 859 for Group-a and 971 for group-B. Test statistic (U) was 506, where the test statistic U was not lies between Population Mean ±1.96 SD which was not significant at 5% level of significance as p > 0.05 Therefore the difference between Symptom Score of Kartanavat Vedana of Experimental group(group-A) and control(group-B) is statistically not significant, so therefore we can conclude that in the symptom Kartanavat Vedana, trial drug and control drug are equally effective statistically.

Likewise in all symptoms viz. Bleeding per rectum, Itching anus, Burning Discharge, Sentinel tags, Inflammations, Tenderness, Sphincter spasm, the test statistics U was not lies between Population Mean ±1.96 SD which was not significant at 5% level of significance as p > 0.05 So from this we can conclude that experimental group treatment is not found statistically significant compare to control group or both group are equally effective statistically.

Table No.4 Percentage of Relief (Subjective Criteria) in each Symptom of Fissure-in-ano.

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Symptoms</th>
<th>Experimental Group</th>
<th>Control Group</th>
<th>Percentage of Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT</td>
<td>AT</td>
<td>% of Relief</td>
</tr>
<tr>
<td>1</td>
<td>Kartanavat Vedana</td>
<td>51</td>
<td>17</td>
<td>66.66</td>
</tr>
<tr>
<td>2</td>
<td>Bleeding per rectum</td>
<td>38</td>
<td>12</td>
<td>68.42</td>
</tr>
<tr>
<td>3</td>
<td>Itching in anus</td>
<td>42</td>
<td>13</td>
<td>69.04</td>
</tr>
<tr>
<td>4</td>
<td>Burning</td>
<td>44</td>
<td>16</td>
<td>63.63</td>
</tr>
<tr>
<td>5</td>
<td>Discharge</td>
<td>20</td>
<td>04</td>
<td>80.00</td>
</tr>
<tr>
<td>6</td>
<td>Sentinel tags</td>
<td>18</td>
<td>12</td>
<td>33.33</td>
</tr>
<tr>
<td>7</td>
<td>Inflammations</td>
<td>18</td>
<td>6</td>
<td>66.67</td>
</tr>
<tr>
<td>8</td>
<td>Tenderness</td>
<td>30</td>
<td>12</td>
<td>60.00</td>
</tr>
<tr>
<td>9</td>
<td>Sphincter spasm</td>
<td>31</td>
<td>14</td>
<td>54.83</td>
</tr>
</tbody>
</table>

Percentage of Relief in Symptoms Score: (Subjective Criteria) In experimental group percentage of relief noted in Kartanavat Vedana was 66.66%, while in other symptoms like Bleeding per rectum percentage of relief was noted as 68.42%, 69.04 % in Itching in anus, 63.63% in Burning, 80.0% in Discharge,
33.33% in Sentinel tags, 66.67% in Inflammations, 60% in Tenderness, 54.83% in Sphincter spasm and respectively.
The relief in percentage in symptoms like Kartanavat Vedana was 63.33%. In other symptoms like Bleeding per rectum percentage of relief was noted as 69.44%, 68.29% in Itching in anus, 65.62% in Burning, 57.89% in Discharge, 25% in Sentinel tags, 69.56% in Inflammations, 66.67% in Tenderness, 57.57% in Sphincter spasm and respectively. Average relief was 62.5% in Experimental group and 60.37% in Control Group.

**DISCUSSION:** Fissure-in-ano is very common and painful condition to the patients hampering quality of life. The ingredients of Jatyadi Taila like Jati, Nimba, Patol, Manjishtha are Kushthaghna and Krimighna, it can be attributed to check wound infection. The Neem and lodhra, Sariwa of Jati, Niha along with Til tail are proven drugs to check bacterial growth and promotes wound healing. Katuka improves re-epithelialization, neo-vascularization and migration of endothelial cells, dermal myofibroblasts and fibroblasts into the wound bed. Kushtha, Nisha and Sikta, Lodhra, Abhaya, Neelam, Utpala, Tutha, Sariva have vrunaropana (Wound healing) action Kushta has anti-inflammatory action. The Jatyadi Taila provided a highly significant effect on the symptoms; burning pain, cutting pain, bleeding, itching, tenderness, inflammation, sphincter spasm, discharge and swelling. Kasisadi Ghruta has described by Acharya Sushruta for healing vrana, it contains Shudha Kasisa, Katuki Mula, Jati Mula, Haridra and Goghruta which having pittnashak, Vranaghana, Kandughna properties. Vata-pittahara property of Kasisadi Ghruta is may be due to Ghrita base and it probably removes the accumulated secretions in the fissure bed, promotes healing and reduces secondary infection too. It having properties like Vrana Sodhana, Vrana Ropana, Sothahara and Vedanasthapana properties. Patient counselling need to be done for diet management. Study can be done on large sample size with more duration to generalize the results. Medicinal treatment can be given along with local application.

**CONCLUSION:** Kasisadi Ghruta and Jatyadi tail are highly significant in symptoms Kartanavat Vedana, Bleeding per rectum, Itching in anus, Burning, Discharge, Inflammations, Tenderness, Sphincter spasm except Sentinel tags. Overall 69.37% percentage of relief was observed in Experimental group while 63.88% in Control group in each patient of fissure-in-ano. Kasisadi Ghruta and Jatyadi tail are equally effective in fissure in ano.

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