EFFICACY OF MATRABASTI ON KASHTARTAVA (PRIMARY DYSMENORRHOEA)

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ABSTRACT
In today's lifestyle woman's status is expected to reach new horizons both socially and physically but some of the physiological things trouble the lady to make her slow down the race, by disturbing the normal menstruation, which is the function of Apana vayu. One of such problem is ‘Kashtartava’ (Dysmenorrhoea) i.e. painful menstruation.

In Ayurvedic texts, though various conditions are described in which menstruation occurs with pain but Kashtartava is not mentioned specifically. It is a symptom of various Yonivyapadas specially Udavarta, Vatala, Sannipatika etc. The genital tract of women does not get affected without Vata, Hence one should pacify it first and then treat the other Doshas. For Vata dosha basti chikitsa is very important.

Matrabasti is used by someone who emaciated by overwork or too much exercise, too much heavy lifting, walking too long of a distance, too much sexual activity or someone with Vata disorders. One of the effects of Matrabasti is “Vatarognut”, Hence Matrabasti may be effective on Kashtartava (Dysmenorrhoea).

From above study, it can be concluded that due to Basti chikitsa vitiated Vata dosha gets mitigated and hence all the symptoms diminish and it has been observed that Til taila Matra Basti is very effective in subjects of Kashtartava (Primary Dysmenorrhoea).

KEYWORDS: Kashtartava, Menstruation, Dysmenorrhoea, Matrabasti.

INTRODUCTION
The Tridosha i.e. Vata, Pitta and Kapha regulates every physiological and psychological process in the living organisms(1). Harmonious state of the three Doshas creates balance and health; an imbalance, which might be an excess (Vriddhi) or deficiency (Kshaya), manifests as a sign or symptom of disease.

Apana is one of the five types of Vata Dosha. It is located in the Apana, moves in Shrroti, Basti, Medhra and Uru. It attends to the functions such as Nishkramana of Shukra, Artava, Shakrut, Mutra and Garbha. One of the functions of Apana vata that is Artava nishkraman karma(2). In this study word Artava is used for “menstrual Blood” (i.e. Rajstrava).

In today's lifestyle woman's status is expected to reach new horizons both socially and physically but some of the physiological things trouble the lady to make her slow down the race, by disturbing the normal menstruation, which is the function of Apana vayu. One of such problem is ‘Kashtartava’ (Dysmenorrhoea) i.e. painful menstruation.

In Ayurvedic texts, though various conditions are described in which menstruation occurs with pain but Kashtartava is not mentioned specifically. It is a symptom of various Yonivyapadas specially Udavarta, Vatala, Sannipatika etc. The genital tract of women does not get affected without Vata, Hence one should pacify it first and then treat the other Doshas(5).

As in all cases of Kashtartava, Vataparakopa is the main cause; the treatment should be directed to treat the Vata dosha and eradication of the cause. This is the main principle of treatment of Kashtartava.

Matrabasti is one of the types of Basti. It can be administered to any individual, at any time. It doesn't cause any Vyapada. It is administered in a smallest quantity (i.e. Hraswa matra of snehapana) without any Pathya aahar and Vihara.(6)

Therefore this study was effort to approach the effect of Matrabasti in the subjects suffering from Kashtartava.

AIMS AND OBJECTIVES
To study Kashtartava (Primary Dysmenorrhoea) from Ayurveda and Modern point of view.
MATERIALS AND METHODS

Conceptual study: Detailed study of Kashtartava (Primary Dysmenorrhoea) along with the review of drugs chosen for Matra Basti from all available books and internet was carried out.

Clinical Study: Patients attending the OPD and IPD of the Y.M. T. Ayurvedic College and Hospital, Kharghar, Navi Mumbai, were enrolled for the study.

Number of Patients
Total number of patients included in this study was 30.

Inclusion criteria
- Subjects with chief complain of Kashtartava (Primary Dysmenorrhoea) with scanty or average amount of menstrual fluid.
- Age group between 15-25 yrs
- Subjects suffering for more than 2 cycles
- Regular menses

Exclusion Criteria
- Subjects below the age of 15 years and above the age of 25 years
- Subjects with chronic general illness
- Subjects with Intrauterine contraceptive devices
- Menorrhagia
- Any uterine pathology
  - Fibroid
  - Adenomyosis
  - Endometriosis
- Irregular menses

Consent
An informed written consent was taken from all the subjects included in this study. In subjects below the age of 18 yrs consent was taken by their guardians.

Methodology
Plan of study
- 30 subjects were included in the study according to inclusion criteria.
- Each subject was examined thoroughly according to Case Record Form (CRF).

Laboratory Investigations
a) Haematological
  1) Hb – To know the severity
  2) W.B.C – To rule out infection
  3) ESR – Rate of infection
b) Sonography (Pelvis) (for uterine and adenexal study, if needed to rule out any pathology or lesion.)

Drug administration details
Subjects were treated with Til Taila Matrabasti which contains: Til Taila (Koshna) (60 ml), Saindhav (1 gm) and Shatpushpa churna (2 gms).

Poorva Karma: Sthanik Abhyang and Sthanik Svedana over Kati, Prushta and Nitamba region
Pradhana Karma: Til Taila Matrabasti was administered slowly through the rectum in left lateral position.

Pashchat Karma: Spik Savahan, Subjects were allowed to sleep in supin position for 10 min, Bastidhara kala of subjects were noted in Case Record Form (CRF) on next day.

Duration of the Treatment - 9 days prior to the expected date of each menstrual cycle for 2 consecutive menstrual cycles.

Follow up: After every cycle of Matrabasti and one month after Completion of treatment follow ups of the subjects were taken, Symptom wise clinical readings were noted.

Bastidraya(7)
- Koshna Til taila (sesame oil)
- Shatpushpa Churna
- Saindhav (Rock salt)

Criteria of Assessment
The efficacy of the therapy is assessed on the basis of objective criteria. Most of the symptom like pain and associated symptoms regarding Kashtartava are subjective in nature. Hence scoring system is adapted for statistical analysis and to give results on objective parameters. Score was given according to absence of symptoms (Normal), mild, moderate and severe symptoms as follows.

Assessment of Effect of Therapy
The effect of the therapy was assessed in terms of cured, markedly improved, improved, and unchanged and LAMA.

Following symptoms were assessed
- Pain (Primary Dysmenorrhoea) - Severity of pain (Multidimensional scoring pattern), Duration of pain: Artava Pramana (Assessment by number of pads used), Rajstrav Avadhi (Duration of menses), Nausea, Vomiting, Diarrhoea, Constipation, Faints and Giddiness.

The details are as follows
1. Cured: Total relief in symptoms will be considered as “Cured”.

2. Markedly Improved: 50% or more average improvement in signs and symptoms will be termed as “Markedly improved”.

3. Improved: Improvement ranging in between 25% to 50% responded by the subjects in signs and symptoms will be taken for “Improved”.

4. Unchanged: Those subjects presenting less than 25% improvement in their signs and symptoms will be categorized as “Unchanged”.

5. LAMA: Those subjects who left the therapy before advised duration or who did not follow the
instructions will be considered as Left against Medical Advice (LAMA).

Statistical Analysis
All data generated and collected during the study was subjected to statistical analysis to reach to final results and conclusions.

Table 1: Showing Statistical Analysis

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>P value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity of pain</td>
<td>&lt;0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>Duration of pain</td>
<td>&lt;0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>Artava Pramana</td>
<td>0.0117</td>
<td>Significant</td>
</tr>
<tr>
<td>Rajstrava avadhi</td>
<td>0.0117</td>
<td>Significant</td>
</tr>
<tr>
<td>Nausea</td>
<td>&lt;0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>Vomiting</td>
<td>0.0002</td>
<td>Significant</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0.0117</td>
<td>Significant</td>
</tr>
<tr>
<td>Constipation</td>
<td>0.0008</td>
<td>Significant</td>
</tr>
<tr>
<td>Faint</td>
<td>0.0059</td>
<td>Significant</td>
</tr>
<tr>
<td>Giddiness</td>
<td>0.0014</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Effect of Matra Basti

Table 2: Severity of Pain wise Distribution

<table>
<thead>
<tr>
<th>BT Subject with Severity of Pain wise Symptom</th>
<th>AT Subject without Severity of Pain wise Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of subject</td>
<td>%</td>
</tr>
<tr>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 30 subjects (100.00%) had symptom in Duration of pain and none of the subject was without symptom. After Matrabasti, 22 subjects (73.33%) had improvement in Duration of pain and 7 subjects (23.33%) it is cured i.e. absent.

Table 3: Duration of Pain wise Distribution

<table>
<thead>
<tr>
<th>BT Subject with Duration of Pain wise Symptom</th>
<th>AT Subject without Duration of Pain wise Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of subject</td>
<td>%</td>
</tr>
<tr>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 30 subjects (100.00%) had symptom in Duration of pain and none of the subject was without symptom. After Matrabasti, 22 subjects (73.33%) had improvement in Duration of pain and in 7 subjects (23.33%) it is cured i.e. absent and in 1 subject (3.33%) it was present.

Table 4: Artava Pramana Wise Distribution

<table>
<thead>
<tr>
<th>BT Subject with Artava Pramana wise Symptom</th>
<th>AT Subject without Artava Pramana wise Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of subject</td>
<td>%</td>
</tr>
<tr>
<td>13</td>
<td>43.33</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 13 subjects (43.33%) had symptom Artava Pramana and 17 subjects (56.66%) were without symptom. After Matrabasti, 5 subjects (16.66%) had improvement in Artava Pramana and in 1 subject (3.33%) it is cured i.e. absent and in 7 subjects (23.33%) it was present.

Table 5: Rajastrava Avadhi Wise Distribution

<table>
<thead>
<tr>
<th>BT Subject with Rajastrava Avadhi wise Symptom</th>
<th>AT Subject without Rajastrava Avadhi wise Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of subject</td>
<td>%</td>
</tr>
<tr>
<td>13</td>
<td>43.33</td>
</tr>
</tbody>
</table>
Out of 30 Subjects included in the trial, 13 subjects (43.33%) had symptom Rajstrava Avadhi and 17 subjects (56.66) were without symptom. After Matrabasti, 5 subjects (16.66%) had improvement in Rajstrava Avadhi and in 1 subject (3.33%) it is cured i.e. absent and in 7 subjects (23.33%) it was present.

<table>
<thead>
<tr>
<th>Table 6: Nausea Wise Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject with Nausea wise Symptom</strong></td>
</tr>
<tr>
<td><strong>BT</strong></td>
</tr>
<tr>
<td>No. of subject</td>
</tr>
<tr>
<td>17</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 17 subjects (56.66%) had symptom Nausea and 13 subjects (43.33%) were without symptom. After Matrabasti, 2 subjects (6.66%) had improvement in Nausea and in 15 subjects (50.00%) it is cured i.e. absent and in none of the subject it was present.

<table>
<thead>
<tr>
<th>Table 7: Vomiting Wise Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject with Vomiting wise Symptom</strong></td>
</tr>
<tr>
<td><strong>BT</strong></td>
</tr>
<tr>
<td>No. of subject</td>
</tr>
<tr>
<td>13</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 13 subjects (43.33%) had symptom Vomiting and 17 subjects (56.66) were without symptom. After Matrabasti, 1 subject (3.33%) had improvement in Vomiting and in 12 subjects (40.00%) it is cured i.e. absent and in none of subject it was present.

<table>
<thead>
<tr>
<th>Table 8: Diarrhoea Wise Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject with Diarrhoea wise Symptom</strong></td>
</tr>
<tr>
<td><strong>BT</strong></td>
</tr>
<tr>
<td>No. of subject</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 6 subjects (20.00%) had symptom Diarrhoea and 24 subjects (80.00%) were without symptom. After Matrabasti, none of the subject had improvement in Diarrhoea and in 6 subjects (20.00%) it is cured i.e. absent and in none of subject it was present.

<table>
<thead>
<tr>
<th>Table 9: Constipation Wise Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject with Constipation wise Symptom</strong></td>
</tr>
<tr>
<td><strong>BT</strong></td>
</tr>
<tr>
<td>No. of subject</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 6 subjects (20.00%) had symptom Constipation and 24 subjects (80.00%) were without symptom. After Matrabasti, none of the subject had improvement in Constipation and in 6 subjects (20.00%) it is cured i.e. absent and in none of subject it was present.

<table>
<thead>
<tr>
<th>Table 10: Faint Wise Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject with Faint wise Symptom</strong></td>
</tr>
<tr>
<td><strong>BT</strong></td>
</tr>
<tr>
<td>No. of subject</td>
</tr>
<tr>
<td>7</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 7 subjects (23.33%) had symptom Faint and 23 subjects (76.66%) were without symptom. After Matrabasti, none of the subject had improvement in Faint and in 7 subjects (23.33%) it is cured i.e. absent and in none of subject it was present.
Table 11: Giddiness Wise Distribution

<table>
<thead>
<tr>
<th>BT</th>
<th>Subject with Giddiness wise Symptom</th>
<th>AT</th>
<th>Subject without Giddiness wise Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Present</td>
<td>Improved</td>
<td>Absent</td>
</tr>
<tr>
<td>No. of subject</td>
<td>%</td>
<td>No. of subject</td>
<td>%</td>
</tr>
<tr>
<td>9</td>
<td>30.00</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>70.00</td>
<td>21</td>
<td>70.00</td>
</tr>
</tbody>
</table>

Out of 30 Subjects included in the trial, 9 subjects (30.00%) had symptom Giddiness and 21 subjects (70.00%) were without symptom. After Matrabasti, none of the subject had improvement in Giddiness and in 9 subjects (30.00%) it is cured i.e. absent and in none of subject it was present.

Table 12: Showing Percentage of Relief

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Reg. No.</th>
<th>Total Symptom Score</th>
<th>Total Relief Score</th>
<th>Relief %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BT</td>
<td>AT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>57502</td>
<td>12</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>56751</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>50523</td>
<td>11</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>49809</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>49544</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>52177</td>
<td>13</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>50043</td>
<td>8</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>52968</td>
<td>11</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>60003</td>
<td>12</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>60475</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>56231</td>
<td>11</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>12</td>
<td>59802</td>
<td>13</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>13</td>
<td>63337</td>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>62176</td>
<td>11</td>
<td>2</td>
<td>9</td>
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<td>62170</td>
<td>9</td>
<td>2</td>
<td>7</td>
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<td>16</td>
<td>62175</td>
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<td>7</td>
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<td>17</td>
<td>62338</td>
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<td>4</td>
<td>10</td>
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<td>18</td>
<td>59376</td>
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<td>0</td>
<td>4</td>
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<td>19</td>
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<td>8</td>
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<td>20</td>
<td>59748</td>
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<td>3</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>64611</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>22</td>
<td>70196</td>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>23</td>
<td>73197</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>24</td>
<td>73183</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>25</td>
<td>73254</td>
<td>9</td>
<td>3</td>
<td>6</td>
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<td>27</td>
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<td>5</td>
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<td>28</td>
<td>73277</td>
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<td>5</td>
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<td>29</td>
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<td>6</td>
</tr>
<tr>
<td>30</td>
<td>73525</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

Clinical efficacy of the therapy under study

Table showing statistical analysis

Table 13: Showing Statistical analysis on Severity of pain

<table>
<thead>
<tr>
<th>Severity of Pain</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>2.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>1.400</td>
<td>1.000</td>
<td>0.371</td>
<td>0.067</td>
<td>14.75</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>1.067</td>
<td>1.333</td>
<td>0.547</td>
<td>0.099</td>
<td>13.36</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>1.000</td>
<td>1.400</td>
<td>0.563</td>
<td>0.102</td>
<td>13.61</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Severity of Pain where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Pain of Kashtartava (Primary Dysmenorrhoea) subjects is effective.
Table 14: Showing Statistical analysis on Duration of Pain

<table>
<thead>
<tr>
<th>Duration of Pain</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>2.333</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>1.567</td>
<td>0.767</td>
<td>0.679</td>
<td>0.124</td>
<td>6.185</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>1.033</td>
<td>1.300</td>
<td>0.651</td>
<td>0.118</td>
<td>10.93</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>1.000</td>
<td>1.333</td>
<td>0.660</td>
<td>0.120</td>
<td>11.05</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Duration of Pain where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Duration of Pain in Kashtartava subjects is effective.

Table 15: Showing Statistical analysis on Artava Pramana

<table>
<thead>
<tr>
<th>Artava Pramana</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.500</td>
<td>0.100</td>
<td>0.305</td>
<td>0.055</td>
<td>1.795</td>
<td>0.0831</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.400</td>
<td>0.200</td>
<td>0.407</td>
<td>0.074</td>
<td>2.693</td>
<td>0.0117</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.400</td>
<td>0.200</td>
<td>0.407</td>
<td>0.074</td>
<td>2.693</td>
<td>0.0117</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Artava Pramana where t-score shows the difference is significant at 2nd and 3rd follow ups. It means that the said therapy used for Artava Pramana in Kashtartava subjects is effective.

Table 16: Showing Statistical analysis on Rajstrava Avadhi

<table>
<thead>
<tr>
<th>Rajstrava Avadhi</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.500</td>
<td>0.100</td>
<td>0.305</td>
<td>0.055</td>
<td>1.795</td>
<td>0.0831</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.400</td>
<td>0.200</td>
<td>0.407</td>
<td>0.074</td>
<td>2.693</td>
<td>0.0117</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.400</td>
<td>0.200</td>
<td>0.407</td>
<td>0.074</td>
<td>2.693</td>
<td>0.0117</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Rajstrava Avadhi where t-score shows the difference is significant at 2nd and 3rd follow ups. It means that the said therapy used for Rajstrava Avadhi in Kashtartava subjects is effective.

Table 17: Showing Statistical analysis on Nausea

<table>
<thead>
<tr>
<th>Nausea</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.267</td>
<td>0.633</td>
<td>0.615</td>
<td>0.112</td>
<td>5.641</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.100</td>
<td>0.800</td>
<td>0.805</td>
<td>0.147</td>
<td>5.442</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.067</td>
<td>0.833</td>
<td>0.834</td>
<td>0.152</td>
<td>5.473</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Nausea where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Nausea in Kashtartava subject is effective.

Table 18: Showing Statistical analysis on Vomiting

<table>
<thead>
<tr>
<th>Vomiting</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.633</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.200</td>
<td>0.433</td>
<td>0.504</td>
<td>0.092</td>
<td>4.709</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.067</td>
<td>0.567</td>
<td>0.728</td>
<td>0.132</td>
<td>4.264</td>
<td>0.0002</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.033</td>
<td>0.600</td>
<td>0.770</td>
<td>0.140</td>
<td>4.267</td>
<td>0.0002</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Vomiting where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Vomiting in Kashtartava subjects is effective.

Table 19: Showing Statistical analysis on Diarrhoea

<table>
<thead>
<tr>
<th>Diarrhoea</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.100</td>
<td>0.300</td>
<td>0.651</td>
<td>0.118</td>
<td>2.523</td>
<td>0.0174</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.000</td>
<td>0.400</td>
<td>0.814</td>
<td>0.148</td>
<td>2.693</td>
<td>0.0117</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.000</td>
<td>0.400</td>
<td>0.814</td>
<td>0.148</td>
<td>2.693</td>
<td>0.0117</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Diarrhoea where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Diarrhoea in Kashtartava subjects is effective.
The table shows the statistical analysis for Constipation where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Constipation in Kashtartava subjects is effective.

<table>
<thead>
<tr>
<th>Constipation</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.767</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.367</td>
<td>0.400</td>
<td>0.621</td>
<td>0.113</td>
<td>3.525</td>
<td>0.0014</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.200</td>
<td>0.567</td>
<td>0.774</td>
<td>0.141</td>
<td>4.011</td>
<td>0.0004</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.267</td>
<td>0.500</td>
<td>0.731</td>
<td>0.133</td>
<td>3.746</td>
<td>0.0008</td>
</tr>
</tbody>
</table>

Table 21: Showing Statistical analysis on Faint

<table>
<thead>
<tr>
<th>Faint</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.233</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.000</td>
<td>0.233</td>
<td>0.430</td>
<td>0.078</td>
<td>2.971</td>
<td>0.0059</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.000</td>
<td>0.233</td>
<td>0.430</td>
<td>0.078</td>
<td>2.971</td>
<td>0.0059</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.000</td>
<td>0.233</td>
<td>0.430</td>
<td>0.078</td>
<td>2.971</td>
<td>0.0059</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Faint where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Faint in Kashtartava subjects is effective.

Table 22: Showing Statistical analysis on Giddiness

<table>
<thead>
<tr>
<th>Giddiness</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>SEM</th>
<th>Paired t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>0.300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st cycle</td>
<td>0.000</td>
<td>0.300</td>
<td>0.466</td>
<td>0.085</td>
<td>3.525</td>
<td>0.0014</td>
</tr>
<tr>
<td>2nd cycle</td>
<td>0.000</td>
<td>0.300</td>
<td>0.466</td>
<td>0.085</td>
<td>3.525</td>
<td>0.0014</td>
</tr>
<tr>
<td>3rd cycle</td>
<td>0.000</td>
<td>0.300</td>
<td>0.466</td>
<td>0.085</td>
<td>3.525</td>
<td>0.0014</td>
</tr>
</tbody>
</table>

The table shows the statistical analysis for Giddiness where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Giddiness in Kashtartava (Primary Dysmenorrhea) subject is effective.

DISCUSSION

The observations noted in 30 subjects and displayed in tables, graphs and supplementary notes are critically discussed hereafter.

It is observed that there was significant improvement in symptoms like Severity pain, Duration of pain and associated symptoms like Artava pramana, Rajstrav Avadhi, Nausea, Vomiting, Constipation, Diarrhoea, Faint and Giddiness. While treating any disease the Mula sthana of vitiated Dosha has to be treated first. According to Acharya Vagbhata, Guda is mula sthana of Apana vayu and Shroni, Basti, Medhra, Uru are the Sanchari sthana of Apana vata. Basti is said to be Pradhan chikitsa of Vata dosha. Therefore it can be concluded that due to Basti chikitsa vitiated Vata dosha gets mitigated and hence all the symptoms diminish. From the above study it has been observed that Til taila Matra Basti is very effective in subjects of Kashtartava.

In this study, Basti is given only for 9 days for two cycles. Majority of subjects had history of Kashtartava for more than 3 years. If this Basti is given for a longer duration along with other medications results would be more significant.

CONCLUSION

Out of 30 subjects of Kashtartava in whom Matrabasti was administered, 2 subjects showed total relief in all symptoms (Cured), 21 subjects showed 50% or more average improvement in all symptoms (Markedly improved), 7 subjects showed improvement ranging in between 25% to 50% (Improved) and none of the subject remain unchanged i.e. those subjects presenting less than 25% improvement.

No adverse effects of Matrabasti were observed in the clinical study. Therefore it can be concluded that due to Basti chikitsa vitiated Vata dosha gets mitigated and hence all the symptoms diminish. From the above study it has been observed that Til taila Matra Basti is very effective in subjects of Kashtartava.

In future, further clinical studies are needed to be performed on a large sample size to backup the above findings. It was an effort to explore the treatise of Ayurveda to find an effective and easily approachable solution on the crisis. The treatise of Ayurveda has been partially explored in the form of Matrabasti on Kashtartava.

REFERENCES


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