COMPARATIVE STUDY OF EFFECT OF AN INDIGENOUS COMPOUND AND RAJAPRAVARTINI VATI IN KSHEENA-ARTAVA DUSTI

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ABSTRACT

Ksheena artava dushti is one of the ashta artava dushti, caused due to the vata, pitta vitiation (vridhi of vata kapha and kshaya of pitta). Agneya substances can be used for the treatment of ksheena artava dushti. For bringing the normal and regular cycles in women, an indigenous compound containing Krishna tila, karpas moola, gajar beeha, methika beeha and guda is used due to its artavajanan property.

Key Words: Artava, Ksheena Artava dushti, Oligomenorrhoea, Artava Kshaya

INTRODUCTION

Stri without any child is called as Vandhya and Sushruta has mentioned "Artavakshaya dusti" (Nastartava) as one of the causes of Vandhyatva. Therefore it is important to treat the female who is suffering from Vandhyatva due to "Artavakshaya ". Ksheena artava dushti is one of the ashtartava dushti and is described in brihatrayi as well as laghutrayi. It is caused by vata and pitta. In ksheena artava dushti menstruation is delayed, scanty and associated with pain in vagina. Susruta mentioned agneya drugs having artava janan property be used in ksheena artava-dushti. Treatment of nastartava is also applicable here. So many compound formulations and single drugs are indicated for treatment of ksheen
artava. A group of few medicinal herbs which have artava-janan effect due to their specific rasa, guna, virya, vipaka and prabhava, included in trial group, were compared with known drug Raja Pravartini vati as control group.

Objectives of study:

To study the detailed etiopathogenesis of ksheena artava dushti. To evaluate the clinical efficacy of indigenous compound in ksheena artava dushti. To compare efficacy with known (Standard) drug Rajapravartini vati.

**Drug Review**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Rasa</th>
<th>Guna</th>
<th>Virya</th>
<th>Vipaka</th>
<th>Dhatu</th>
<th>Dosha Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karpasa Moola</td>
<td>Madhura</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Rakta vardhak</td>
<td>Vatashamaka</td>
</tr>
<tr>
<td>Garjara Beeja</td>
<td>Madhura, Tikta</td>
<td>Laghu, Snigdha, Tikshana</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Rasavardhaka</td>
<td>Tridosha Shamaka</td>
</tr>
<tr>
<td>Methika Beeja</td>
<td>Katu rasa</td>
<td></td>
<td>Ushna</td>
<td>Katu</td>
<td>Meda, Asthi</td>
<td>Vata Kaphaghna</td>
</tr>
<tr>
<td>Krishna tila</td>
<td>Madhura</td>
<td>Guru, Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Raktha, Medha, Mamsa etc.,</td>
<td>Vatashamaka Kapha pitta vardhak</td>
</tr>
<tr>
<td>Guda</td>
<td>Madhura</td>
<td>Brumhaniya, Vrishya, Snigdha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Raktha</td>
<td>Vatashamaka Kapha pitta vardhak</td>
</tr>
</tbody>
</table>

**SELECTION OF PATIENTS:**

Patients were selected from Prasooti department OPD of Siddharudha Charitable Hospital, Bidar, for the present study.
Patients were selected randomly based on the criteria for the selection of patients.

**CRITERIA FOR SELECTION OF PATIENTS:**

Patients were selected on the basis of the symptoms as mentioned below.

- If interval between two cycles exceeds more than 35 days (delayed).
- If the duration of menstrual flow is 2 days or less.
- If the quantity of menses is very less (scanty menstruation)
- Painful menstruation along with other (above) symptoms.

There is no definite amount of blood loss per day clearly mentioned but in the present study the no of pads used by the patient per day was taken as the criteria of quantity of menstrual blood.

**CRITERIA FOR DIAGNOSIS:**

- A special proforma was prepared to maintain the records of findings during case taking.
- The condition with all the symptoms was assessed before and after treatment.
- Routine haematological & ultrasound examination were done prior to the treatment.

**MANAGEMENT OF THE PATIENTS:**

All the selected patients fulfilling the criteria of selection were randomly divided into 2 groups.

**GROUP A: Indigenous compound (Trial drug)**

Dose : 1 gm thrice daily
Route : Orally
Duration : 3 consecutive cycles
Anupan : Luke Warm Water
Follow up : After each cycle
GROUP B: Rajapravartini Vati

Dose : 250 mg thrice daily.
Route : Orally
Duration : Three consecutive cycles
Anupan : Luke warm water
Follow up : After each cycle

CRITERIA FOR ASSESSMENT OF RESULTS:

The criterion for assessment of treatment is based on improvement in cardinal symptoms, like quantity of menstrual blood, duration of menstrual bleeding, interval between two cycles (inter menstrual period) and pain during menses.

According to the severity and intensity of the cardinal symptoms of Artavakshaya these were graded on the basis of scoring system.

SCORING SYSTEM:

1) Duration of Menstrual blood:
   ➢ 0 - 4-7 days

2) Interval between two menstrual cycles:
   ➢ 0 - 24 to 34 days
   ➢ 1 - 35 to 39 days
   ➢ 2 - 40 to 45 days
   ➢ 3 - Above 45 days

3) Quantity of menstrual blood:
   ➢ 0 - 4 or more than 4 pads/day
   ➢ 1 - 3 pads/day
   ➢ 2 - 2 pads/day
   ➢ 3 - 1 pad/day
   ➢ 4 - Spotting (without pads).

4) Pain During menses (Yoni vedana):
   ➢ 0 - No Pain
   ➢ 1 - Mild Pain
   ➢ 2 - Moderate Pain
   ➢ 3 - Severe Pain
   ➢ 4 - Unbearable Pain
**Note:** Pain is difficult to measure, so here it was assessed by the verbal multi-dimensional scoring system.

- **No Pain** - Not painful.
- **Mild Pain** - Mild discomfort.
- **Moderate Pain** - Can continue physical activities.
- **Severe Pain** - Hampers routine activities.
- **Unbearable Pain** - Most excruciating pain.

**TOTAL EFFECT OF THERAPY:**

Total effect of therapy was assessed in terms of cured, improved, and unchanged.

**Cured:**

Duration of bleeding is 4-7 days; interval of cycle is 28-35 day, normal quantity of bleeding in cycle.

**Improved:** There is improvement in one or two symptoms.

**Unchanged:** There is no change in any of the parameters of duration internal and quantity.

**OBSERVATIONS & RESULT**

Thirty patients were selected randomly for the thesis work. All the selected patients were thoroughly examined, diagnosed and selected based on inclusive and exclusive criteria. The assignment revealed the following statistics.

**Comparison between two groups**

Showing changes in duration of menstrual cycles and comparison between the groups at different follow-ups.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Follow up</th>
<th>Initial</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td>1.8</td>
<td>0.46</td>
<td>0.86</td>
<td>1.26</td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>1.8</td>
<td>0.4</td>
<td>0.73</td>
<td>1.06</td>
<td></td>
</tr>
<tr>
<td>± SD</td>
<td>Group A</td>
<td>0.86</td>
<td>0.516</td>
<td>0.50</td>
<td>0.40</td>
</tr>
</tbody>
</table>
Comparative study of effect of an indigenous compound and Rajapravartini Vati in Ksheena-Artava Dusti

Comparison between group un paired t test

<table>
<thead>
<tr>
<th>Groups</th>
<th>Follow up</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td>Initial</td>
<td>1.94</td>
<td>0.07</td>
<td>1.14</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td>1.74</td>
<td>0.54</td>
<td>0.89</td>
</tr>
<tr>
<td>± SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td></td>
<td>0.593</td>
<td>0.7</td>
<td>0.59</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td>0.703</td>
<td>0.457</td>
<td>0.351</td>
</tr>
<tr>
<td>S.E</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td></td>
<td>0.153</td>
<td>0.180</td>
<td>0.153</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td>0.181</td>
<td>0.118</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Comparison between group un paired t test

<table>
<thead>
<tr>
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<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td></td>
<td>1.13</td>
<td>0.26</td>
<td>0.53</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td>0.74</td>
<td>0.07</td>
<td>0.20</td>
</tr>
<tr>
<td>± SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td></td>
<td>0.833</td>
<td>0.381</td>
<td>0.516</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td>0.798</td>
<td>0.258</td>
<td>0.414</td>
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<tr>
<td>S.E</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td></td>
<td>0.215</td>
<td>0.098</td>
<td>0.133</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td>0.206</td>
<td>0.067</td>
<td>0.106</td>
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</tbody>
</table>

Showing changes in interval of menstrual cycles and comparison between the groups of different follow-ups.

Showing changes in pain during menstruation and comparison between the groups of different follow-ups.
Showing changes in quantity of blood loss and comparison between the groups of different follow ups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Follow up</th>
<th>Initial</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Group A</td>
<td>1.53</td>
<td>0.73</td>
<td>0.87</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>Group B</td>
<td>1.6</td>
<td>0.26</td>
<td>0.66</td>
<td>1.06</td>
</tr>
<tr>
<td>SD±</td>
<td>Group A</td>
<td>0.516</td>
<td>0.457</td>
<td>0.64</td>
<td>0.639</td>
</tr>
<tr>
<td></td>
<td>Group B</td>
<td>0.736</td>
<td>0.457</td>
<td>0.458</td>
<td>0.257</td>
</tr>
<tr>
<td>S.E</td>
<td>Group A</td>
<td>0.133</td>
<td>0.118</td>
<td>0.165</td>
<td>0.165</td>
</tr>
<tr>
<td></td>
<td>Group B</td>
<td>0.190</td>
<td>0.118</td>
<td>0.125</td>
<td>0.066</td>
</tr>
<tr>
<td>Comparison between group un paired t test</td>
<td>T = 0.258 P &lt;0.10 S</td>
<td>T=1.607 P&lt;0.2 HS</td>
<td>T=0.775 P&lt;0.5 HS</td>
<td>T=0.518 P&lt;0.7 HS</td>
<td></td>
</tr>
</tbody>
</table>

**Overall Result:** Showing result of total cases of group A total no of cases 15.

<table>
<thead>
<tr>
<th>Result</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cured</td>
<td>11</td>
<td>73.33%</td>
</tr>
<tr>
<td>Improved</td>
<td>3</td>
<td>20.00%</td>
</tr>
<tr>
<td>No Change</td>
<td>1</td>
<td>6.67%</td>
</tr>
</tbody>
</table>
Showing result of total cases of group b total no of cases 15

<table>
<thead>
<tr>
<th>Result</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cured</td>
<td>9</td>
<td>60%</td>
</tr>
<tr>
<td>Improved</td>
<td>5</td>
<td>33.33%</td>
</tr>
<tr>
<td>No Change</td>
<td>1</td>
<td>6.67%</td>
</tr>
</tbody>
</table>

**DISCUSSION**

The present study is planned to assess the efficacy of an indigenous compound which contains karpas moola, Krishna tila, gajar beeja, methika beeja and guda in equal quantity and also to compare the efficacy with the known drug Rajapravartini vati in Ksheena Artava Dushti.

After preliminary study of the properties of the above mentioned drugs, the present study was undertaken by preparing these drugs in a tablet (vati) form.

Clinical Study:
In this study total 30 patients were taken, dividing them in two groups.

Group A: 15 patients treated by trial drug containing karpas moola, gajar beeja, methika beeja, Krishna tila and guda.

Group B: 15 patients treated by using standard drug Rajapravartini vati.

The overall effect of both the therapies on cardinal symptoms of arthav kshaya showed that, trial drug, (A combination of Krishna tila, karpas moola, gajar beeja, methika beeja and guda) is more effective to increase duration of menstrual period, to decrease intermenstrual period and increase the quantity of blood loss so trial drug is more efficacious than rajapravartini vati.

The comparison made with rajapravartini vati was just to find out the efficacy of trial drug. The trial drug has definitely shown better results as indicated by significant ‘t’ value, ‘P’ value and thus shown better result than rajapravartini vati.

Though the study has been carried on less number of patients because of time shortage but it is sure to benefit more number of patients. If this drug can be tested on a large scale, it will be beneficial for patients of arthavkshaya

CONCLUSION

1. Ksheen-artava dusti is caused by vata and pitta which can be attributed to dosha vitiation, secondly to dhatu kshaya (like malnutrition, anemia etc).

2. Ksheen-artava dusti can also occur due to involvement of vata and kapha, which can be
attributed to marga avarodha of artava vaha strotas.

3. The trial drug (Krishna tila, Karpasa moola, gajar beeja, meythika beeja, guda) has estrogenic activity as well as dhatu poshak quality, so it acted well in oligomenorrhoea cases (which were proved by animal experimentation on karpas mool and gajar beeja at Trivendrum).

4. Trial drug contains Krishna tila and guda. Guda is better for improving hemoglobin percentage because of its ferrous content so it is acting on uterine muscles as well as general body to regularize menstrual cycle.

5. Tila also has quality as balya and it helps in improving dhatus specially meda (fat) in the body which is important for proper menstruation. i.e., the reason to conclude the efficacy of trial drug.

6. In this comparative study trial drug proved to be more efficacious than Rajapravartini vati.

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Source of Support: NIL
Conflict of Interest : None declared