A COMPARATIVE CLINICAL EVALUATION OF PARIBHADRA (ERYTHRINA INDICA Lam.) PATRA & TWAK WITH SPECIAL REFERENCE TO KASHTARTAVA (PRIMARY DYSMENORRHOEA)

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INTRODUCTION

Women’s health is the primary factor to be considered for the well-being of family, society and nation. Any physical or mental disorder disturbs her educational, social, and economic life. Classics have described all the gynaecological problems under the umbrella of Yoni vyapats. The disease Kashtartava is not described in classics as an individual disease entity. Kashtartava is mentioned as a symptom of Udavarta, Apanavata margavarodha, artava dushti and dhatu kshaya. Kashtartava being painful menstruation is commonly compared with the concept of dysmenorrhea in conventional science. The conventional science tries to find a cure for this through analgesics and hormonal therapy which often results in ill effects. Here comes the importance of herbal remedies of Ayurveda. A clinical study was conducted on 30 patients of Kashtartava, vati of Paribhadra Patra and Twak (Erythrina indica Lam.) were administered for a period of 12 days, starting from 5 days prior to menstruation for 3 consecutive cycles. Paribhadra show a wide range of therapeutic usage. Because of its properties like Katu-tikta rasa, ushna veerya, katu vipaka, vata-kaphahara, medohara, deepaka, pachaka etc might help in samprapti vighatana of Kashtartava. Clinical study shows that, both Patra and Twak of Paribhadra are useful in treating Primary dysmenorrhea. When statistical values are compared, effect of Paribhadra Patra was better than Paribhadra Twak. After assessing the results, it was observed that in Group A, 4 patients had good improvement, 9 had moderate improvement and 2 had slight improvement. In Group B, 2 patients had good improvement, 10 had moderate improvement, 2 had slight improvement and 1 had no improvement. The present study shows significant result in Kashtartava.

KEYWORDS: Kashtartava, Artavavyapat, Dysmenorrhea, Paribhadra, Erythrina indica

ABSTRACT

Kashtartava is a condition mentioned in various Artavavyapats and other diseases related to female reproductive system. On analysis, one can make out that, it is a result of vatavruddhi, apanavata margavarodha, artava dushti and dhatu kshaya. Kashtartava being painful menstruation is commonly compared with the concept of dysmenorrhea in conventional science. The conventional science tries to find a cure for this through analgesics and hormonal therapy which often results in ill effects. Here comes the importance of herbal remedies of Ayurveda. A clinical study was conducted on 30 patients of Kashtartava, vati of Paribhadra Patra and Twak (Erythrina indica Lam.) were administered for a period of 12 days, starting from 5 days prior to menstruation for 3 consecutive cycles. Paribhadra show a wide range of therapeutic usage. Because of its properties like Katu-tikta rasa, ushna veerya, katu vipaka, vata-kaphahara, medohara, deepaka, pachaka etc might help in samprapti vighatana of Kashtartava. Clinical study shows that, both Patra and Twak of Paribhadra are useful in treating Primary dysmenorrhea. When statistical values are compared, effect of Paribhadra Patra was better than Paribhadra Twak. After assessing the results, it was observed that in Group A, 4 patients had good improvement, 9 had moderate improvement and 2 had slight improvement. In Group B, 2 patients had good improvement, 10 had moderate improvement, 2 had slight improvement and 1 had no improvement. The present study shows significant result in Kashtartava.

KEYWORDS: Kashtartava, Artavavyapat, Dysmenorrhea, Paribhadra, Erythrina indica
Dysmenorrhoea is one of the most frequent among gynaecological complaints. Not less than 50% of adult female populations suffer from some discomfort in relation to menstruation. Majority of cases of dysmenorrhoea fall in to the group of primary dysmenorrhoea. Today’s stressful modern life style, food habits, and frequent interventions of female genital tract affect the uterine environment, which leads to higher incidence of dysmenorrhoea.

In this study, primary dysmenorrhoea is selected as it is most common and relevant to the era of changing life styles. Vata is main causative factor of all Yonivyapats, so it should be treated first. Then other associated doshas should be treated. In Yonivyapats, Arthava will be in dushtavastha, and arthava shuddhi should be attained by following shodhana. Later, deepana-pachana, snehana, svedana, five Shodhana measures should be used, after this Uttarbasti should be given repeatedly.

Paribhadra Patra and Twak were selected as the trial drugs. Paribhadra (Erythrina indica Lam.) belonging to Fabaceae family, is having katu-tikta rasa, ushna veerya, vata-kaphahara, medohara, deepaka, pachaka, shoolaghna, arthava shodhaka etc properties, which may help in Samprapti Vighatana of Kashtartava. The bark has got smooth muscle relaxant property on isolated rat uterus. It is also mentioned that Paribhadra leaves and bark can be used to treat dysmenorrhoea. So Paribhadra relieves pain and have special target effect on garbhashaya also. Kashtartava being pain originated from garbhashaya, this drug is thus inferred to be useful in Kashtartava. Moreover that, there are many tribal claims about their usefulness in Kashtartava.

The treatment modalities in modern system of medicine are analgesics, antispasmodics, prostaglandin synthetase inhibitors, combined oral contraceptives and surgery. These medicines do not provide a long lasting solution and have serious adverse effects. Hence there is a need to find a safe and effective solution for dysmenorrhoea.

OBJECTIVES
Comparative clinical evaluation of the Paribhadra (Erythrina indica Lam.) Patra and Twak on Kashtartava (Primary dysmenorrhoea).

MATERIALS AND METHODS
Collection and Preparation of Drugs:
Paribhadra Patra and Twak were collected as per season after authentic botanical identification. Paribhadra Patra Vati - Paribhadra (Erythrina indica Lam.) leaves were collected, cleaned and micropulverised as per rules of GMP and fine powder was obtained. To increase the potency the churna is given bhavana with the kashaya of the same and rolled in to 500mg Vati.

Paribhadra Twak Vati - The bark is collected, cleaned and micropulverised as per rules of GMP and fine powder was obtained. To increase the potency the churna is given bhavana with the kashaya of the same and rolled in to 500mg Vati.

Selection of the cases:
30 patients complaining of pain during menstruation attending to the OPD of K V G Ayurveda Medical College & Hospital, Sullia were taken into this study. They were divided into 2 groups using computer
generated list, Group A & B comprising of 15 patients each. Samples were selected as per the inclusion and exclusion criteria.

**Inclusion criteria:**
- Women between 15-25 years of age.
- Uncomplicated cases of primary dysmenorrhoea.
- Patient presenting signs and symptoms of dysmenorrhoea.

**Exclusion criteria:**
- Congenital anomalies leading to dysmenorrhoea.
- Patients having pelvic inflammatory diseases.
- Diseases which simulate dysmenorrhoea.
- Patients with chronic general illness.
- Patients below 15 years & above 25 years of age.
- Patients those who are married.

**Assessment criteria**

The patient’s response was assessed on the basis of subjective parameters alone.

Pain was assessed using the following criteria-

**Table 1: I. Pain during menses**

<table>
<thead>
<tr>
<th>Scoring</th>
<th>Pain during menses</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Absent</td>
</tr>
<tr>
<td>1</td>
<td>Present, daily activity not affected, no analgesics required.</td>
</tr>
<tr>
<td>2</td>
<td>Present, daily activity affected, analgesics required.</td>
</tr>
<tr>
<td>3</td>
<td>Present, unable to carry out routine activities, not subsided by taking analgesics.</td>
</tr>
</tbody>
</table>

**Table 2: II. Associated complaints**

<table>
<thead>
<tr>
<th>Nausea</th>
<th>Present/Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vomiting</td>
<td>Present/Absent</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Present/Absent</td>
</tr>
<tr>
<td>Fainting</td>
<td>Present/Absent</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>Present/Absent</td>
</tr>
<tr>
<td>Suprapubic tenderness</td>
<td>Present/Absent</td>
</tr>
<tr>
<td>Breast engorgement</td>
<td>Present/Absent</td>
</tr>
</tbody>
</table>

If present : 1
Absent : 0

**Treatment plan:**

**Group A:** *Paribhadra Patra vati*-Oral- 3gm/day, in two divided doses.

**Group B:** *Paribhadra Twak vati* -Oral - 3gm/day, in two divided doses.

Vati was given morning and night prior to food along with sukhoshna jala for 12 days (starting from 5 days prior to the expected date of menstruation) for three consecutive cycles.

**Follow up:** For one successive menstrual cycle.

**PATHYA-APATHYA:**

**Pathya**

*Ahara* - Patients were advised to take *Ushna* and *laghu ahara*, *Ushna jala pana*

*Vihara* - *Yogasana*, Hot water bath,

**Apathya:**

*Ahara* - *Atyamla, katu, lavana rasa sevana, Atyushna and sheetha ahara sevana.*

*Vihara* - Cold water bath, exposure to cold weather or wind.

**RESULTS**

**Statistical analysis:**

The obtained data were analyzed statistically. The values were expressed as
Mean ± SEM. The data were analyzed by paired ‘t’ test and unpaired ‘t’ test as required. The level of P<0.05 and P<0.01, P<0.001 was considered as statistically significant and highly significant respectively. Level of significance was noted and interpreted accordingly.

Table 3: Table showing the comparative results of Group-A and Group-B

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Group-A</th>
<th>‘p’ value</th>
<th>Group-B</th>
<th>‘p’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean score BT</td>
<td></td>
<td>Mean score BT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean score FU</td>
<td></td>
<td>Mean score FU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘p’ value</td>
<td></td>
<td>‘p’ value</td>
<td></td>
</tr>
<tr>
<td>Pain during menstruation</td>
<td>2.27</td>
<td>&lt;0.001</td>
<td>2.30</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>1.25</td>
<td></td>
<td>1.47</td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td>0.53</td>
<td>&lt;0.05</td>
<td>0.60</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td></td>
<td>0.33</td>
<td></td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>Vomiting</td>
<td>0.27</td>
<td>&gt;0.05</td>
<td>0.47</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td></td>
<td>0.13</td>
<td></td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>Fatigue</td>
<td>1.13</td>
<td>&gt;0.05</td>
<td>0.73</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td></td>
<td>0.80</td>
<td></td>
<td>0.53</td>
<td></td>
</tr>
<tr>
<td>Fainting</td>
<td>0.33</td>
<td>&gt;0.05</td>
<td>0.20</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td></td>
<td>0.20</td>
<td></td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0.20</td>
<td>&gt;0.05</td>
<td>0.20</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td></td>
<td>0.13</td>
<td></td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>Suprapubic tenderness</td>
<td>1.13</td>
<td>&gt;0.05</td>
<td>0.80</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td></td>
<td>0.93</td>
<td></td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Breast engorgement</td>
<td>0.20</td>
<td>&gt;0.05</td>
<td>0.20</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td></td>
<td>0.13</td>
<td></td>
<td>0.13</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: OVERALL RESULT OF THERAPY

<table>
<thead>
<tr>
<th>Class</th>
<th>Grading</th>
<th>No of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Group A</td>
</tr>
<tr>
<td>0</td>
<td>No improvement</td>
<td>0</td>
</tr>
<tr>
<td>0-25%</td>
<td>Little improvement</td>
<td>02</td>
</tr>
<tr>
<td>26%-50%</td>
<td>Moderate improvement</td>
<td>09</td>
</tr>
<tr>
<td>51%-75%</td>
<td>Good improvement</td>
<td>04</td>
</tr>
<tr>
<td>76-100%</td>
<td>Completely cured</td>
<td>0</td>
</tr>
</tbody>
</table>

DISCUSSION

This study was aimed to assess the efficacy of Paribhadra Patra and Twak vati in the patients of Kashtartava. Out of 15 patients of Group A, 4 patients had good improvement, 9 had moderate improvement and 2 had slight improvement. Out of 15 patients of Group B, 2 patients had good improvement, 10 had moderate improvement, 2 had slight improvement and 1 had no improvement. There was significant improvement in nausea in group A and no significant improvement in vomiting, fatigue, fainting, diarrhoea, supra pubic tenderness and breast engorgement in both the groups.

Kashtartava is a sadhyavyadhi. In Ayurveda, Vataprapkopa is the main causative factor in Kashtartava. By the properties like-ushna veerya, anulomaka, deepaka, pachaka, shoolahara, and kaphavatahara etc. it might help in the samprapti vighatana. The leaves and bark of Paribhadra (Erythrina indica Lam.) has got emmenagogue property. The bark has proved to be having smooth muscle relaxant property on isolated rat uterus.24

Action of a drug can be explained on the basis of rasapanchaka. Rasa panchaka reveals its action on Tridosha and saptadhatu. Katu-tikta Rasa is amapachaka, kaphahara. It does Ama pachana and thereby removes the sanga of arthavavaha srothas. Laghu-Ruksha guna is kaphahara and amahara. Ushna veerya does agni deepana and pacifies Vata and Kapha. Katu
vipaka does ama pachana and it does the shamana of the nidanas of Kashtartava. By these properties it removes block (sanga) of arthavavaha srothas. Katu-tikta rasa and ushna veerya dravyas are having lekhana and srotoshodhana properties, which help in the samprapti vighatana. By vataghna and shulaghna effect, it directly acts against pain in Koshta. The property of Vatanulomana corrects the path of apana vata and expels it out from koshta. This again helps in relieving koshtagata vata. In the patients who continued intake of Paribhadra Patravati for about 4 cycles, dysmenorrhoea was not found even after stopping it, for a long time.

Paribhadra bark is proved to be analgesic, anti-inflammatory and emmenagogue. Thus it has a direct effect on prostaglandin release and thereby on dysmenorrhoea. Leaves are having laxative, smooth muscle relaxant and emmenagogue properties, thereby does the anulomana of obstructed Vata. Antispasmodic and spasmolytic activity of Paribhadra relieves excessive muscular contractions further leading to reduction in pain. Leaves are having haemagglutinating activity and anti-spasmodic action. The alkaloids extracted from the leaves are reported to have anti-inflammatory activity and which was isolated from the bark showed muscle relaxant activity. These helped in relieving the pain. There were no side effects observed during the study.

CONCLUSION
There are no direct references in the classics or Nighantu’s regarding the usage of Paribhadra Patra and Twak on Kashtartava. Through an extensive literary review it was revealed that, the drug is having anti-spasmodic, analgesic, anti-inflammatory and emmenagogue actions. Kashtartava is not mentioned as a specific disease entity in Ayurveda, instead is a symptom in Udaavarta, Vatala, Paripluta, Mahayoni, sannipatika yonivyapats and vataja artavadushti. On analysis the treatment principle should be Vata-Kaphahara, Anulomaka and Arthava shodhaka. Primary dysmenorrhoea is spasmodic pain during menstruation which does not involve any pelvic pathology. Clinical study showed that, both Patra and Twak of Paribhadra are useful in treating primary dysmenorrhoea. When statistical values were compared, effect of Paribhadra Patra appears to be better than Paribhadra Twak. No side effects were observed in both the groups in this study, hence Paribhadra Patra and Paribhadra Twak can be considered as a safer remedy for Kashtartava.

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