A COMPARATIVE CLINICAL STUDY OF PACHOTTI KUVALADI KASHAYA AND SAPTASARA KWATHA IN UDAVARTINI YONIVYAPAD

Priyanka Tiwari¹*, Shivale Digambar P.² and Reema Lakshmi³

¹³rd Year PG Scholar, Dept. of Prasooti Tantra and Stree Roga, Alva’s Ayurveda Medical College & Hospital, Moodbidri, Karnataka, India.

²Associate Professor, Dept. of Prasooti Tantra and Stree Roga, Alva’s Ayurveda Medical College & Hospital, Moodbidri, Karnataka, India.

³Assistant Professor, Dept. of Prasooti Tantra and Stree Roga, Alva’s Ayurveda Medical College & Hospital, Moodbidri, Karnataka, India.

ABSTRACT

With the advent of new millennium and the herald of high-tech era, women’s status was expected to reach new horizons. Women in hurry of competing, to the challenging world has changed her life style drastically, which is making her to suffer from many gynecological problems. Menstruation is a phenomenon unique to the females. It is a natural event in the reproductive stage. Dysmenorrhea is the leading cause of recurrent short-term school absence in adolescent girls and a common problem in women of reproductive age that can affect the quality of life. The lady feels relief immediately following discharge of menstrual blood. Since in this condition the raja moves upwards or in reverse direction hence it is termed as udavartini. It is one of the most frequent of gynaecological complaints. Here the main reason for pain is the Prakopana & viloma/pratiloma gati of vata dosha which is obstructing the pathway of Artava.

Objectives: To compare the effect of Pachotti kuvaladi Kashaya and Saptasara kwatha in Udavartini Yonivypad.

Methodology: This research work was a randomized comparative clinical study of 40 patients suffering from symptoms of Udavartini Yonivypad, who were randomly selected and categorized into 2 groups of 20 patients each. Group A was treated with Pachotti kuvaladi Kashaya and group B with Saptasara Kwatha. Both Kashayas were given in Apanakaala (before food) with Sukhoshna Jala as Anupana.
Duration of treatment: 10 days (Starting 7 days before the commencement of cycle till 3rd day of the menstrual cycle) for 3 consecutive cycles. Results and Interpretation- Both the groups showed statistically significant results. Statistically, there was no significant difference between the groups. Conclusion: Both Pachotti kuvaladi kashaya and Saptasara Kwatha had an equal effect in treating Udavartini Yonivyapad.

KEYWORDS: Udaavartini, dysmenorrhoea, Shamana and Shodhana therapies.

INTRODUCTION
Dysmenorrhea is a Greek term for “Painful monthly bleeding”. It is a medical condition characterized by severe uterine pain during menstruation. While most women experience major pain during menstruation, Dysmenorrhea is diagnosed when the pain is so severe as to limit normal activities, or require medication. Dysmenorrhea affects 40-70% of women of reproductive age, and affects daily activities in up to 10% of women.[1] The prevalence of Dysmenorrhea in adolescent girls was found to be 79.67%. Most of them, 37.96% suffered regularly from Dysmenorrhea severity. The true incidence and prevalence of Dysmenorrhea are not clearly established in India. In recent times, George and Bhaduri concluded that Dysmenorrhea (87.87%) is common in India.[2] The aetiology of primary Dysmenorrhea is not precisely understood, but most symptoms can be explained by the action of uterine prostaglandins, particularly PGF2α during endometrial sloughing, the disintegrating endometrial cells release PGF2α as menstruation begins PGF2α stimulates myometrial contraction, ischemia and sensitization of nerve endings.[3] According to our classics “Na hi Vaatadrite Shoolam” which means pain is the indication of vata vikriti and Apana vata is the main culprit in all the gynaecological disorders. Normal menstruation is the function of Apanavata, so the painful menstruation is considered as Apanavatadushti.[4]

This condition appears similar to Udavartini yonivyapad. The clinical entity characterized by pain, difficult expulsion of menstrual blood due to upward movement of rajas propelled by vitiated vata. The upward movement is called as udavrittam.[5] The lady feels relief immediately following discharge of menstrual blood. An attempt is been made to treat the condition with Pachotti kuvaladi kashaya is the yoga mentioned in Sahasrayoga. The indication of these drugs is given in Artava shoola which acts as vata shamaka, vata anulomaka and shoolahara properties.[6]
Till date no study has been done on *Pachotti kuvaladi Kashaya* considering the above factors an attempt is made to compare the effect of *Pachotti Kuvaladi Kashaya* and *Saptasara Kashaya* in the management of *Udavartini yonivyapad* with special reference to Primary Dysmenorrhea.

**MATERIALS AND METHODS**

**Collection of sources:** 40 samples were selected randomly from OPD of PTSR of Alva’s Ayurveda Hospital, Moodbidri, Medical camps and other referrals, irrespective of their religion, economic status & occupation.

**Study design:** A randomized comparative clinical study

**Collection and Preparation of drug:** Raw drugs were identified and collected from the local market and *Kashaya* was prepared at Alva’s pharmacy, Mijar

Method of data collection

a) **Selection of subjects:** Patients presenting with the symptoms of *Udavartini Yonivyapad* ful filling the inclusion criteria will be selected for the study.
   
   - Sample size: 40
   - Grouping: 2 arms (A & B)
   - Number: 20 in each arm
   - Study design: A randomized comparative clinical study
   - Blinding: Single-blind
   - Method sampling: Lottery method

b) **Diagnostic criteria**

Patients fulfilling any of the following diagnostic criteria will be selected for the study.

- Painful menstruation – *Saa Rugaarta Rajah Krichrena Udavruttam Vimunchati*.
- Pain begins before one or two days of menstruation/with onset of menstruation and lasting for 1 to 2 days.
- Pain in the lower abdomen and supra-pubic region, radiating to medial aspect of thigh and lower back.
- Painful menstruation also associated with symptoms like Headache, Nausea, Vomiting, Constipation, Giddiness, headache.
c) **Inclusion criteria**
- Patients fulfilling the diagnostic criteria
- The age group between 15-30 years
- H/O painful menstruation for at least 3 consecutive menstrual cycles
- Patients with regular menstrual cycles

d) **Exclusion criteria**
- Cases of Secondary Dysmenorrhea with pelvic pathology - Fibroid of Uterus,
- Ovarian Cyst, Endometriosis, Menorrhagia
- Acute infection, Acyclic bleeding
- Patient with systemic diseases like Diabetes, Hypertension
- Congenital anomalies leading to Dysmenorrhea
- Surgical, Malignant condition
- Patient on hormonal therapy

e) **Interventions**
Treatment was started 7 days before expected menstruation and was continued up to another 3 days for 3 consecutive cycles.

**Table no. 1**

<table>
<thead>
<tr>
<th>Group</th>
<th>Sample</th>
<th>Yoga</th>
<th>Dose</th>
<th>Time of administration</th>
<th>Anupana</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20</td>
<td>Pachotti Kuvaladi</td>
<td>50ml</td>
<td>Before food, BD</td>
<td>Lukewarm water</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kashaya</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>Saptasara Kwatha</td>
<td>50ml</td>
<td>Before food, BD</td>
<td>Lukewarm Water</td>
</tr>
</tbody>
</table>

**Group A** - Given with *Pachotti Kuvaladi Kashaya* 50ml BD with an equal amount of lukewarm water.

**Group B** - Given with *Saptasara kashaya* 50 ml BD with an equal amount of lukewarm water

f) **Observation period**
The total duration of treatment: 3 months

Treatment period: 10 days

Days of assessment: 4th day of each menstrual cycle for 2 consecutive days.
Follow up: 4th day of 3rd cycle.
g) Assessment criteria

- Intensity of pain
- Nature of pain
- Site of pain
- Duration of pain
- Associated complaints – Nausea, Vomiting, Loose stools

1. No Pain – 0 - Grade – 0
2. Mild pain – 1-3 - Grade - 1
3. Moderate pain – 4-6 - Grade - 2
4. Severe pain – 7-10 - Grade – 3

Table 2

<table>
<thead>
<tr>
<th>Assessment criteria</th>
<th>Grade 0</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensity of pain</td>
<td>0 (No pain)</td>
<td>1 to 3 (Mild pain)</td>
<td>4-6 (moderate pain)</td>
<td>7-10 (Severe pain)</td>
</tr>
<tr>
<td></td>
<td>Menstruation is not painful and daily activity is unaffected</td>
<td>Menstruation is painful but daily activity is not affected</td>
<td>Menstruation is painful and daily activity is affected. Analgesic drug is needed.</td>
<td>Menstruation is so painful that patient is unable to do even the routine work and has to take analgesic, but without much relief</td>
</tr>
<tr>
<td>Duration of Pain</td>
<td>No pain</td>
<td>Pain continues for up to 24 hrs.</td>
<td>Pain continues for 24 to &lt; 48 Hrs</td>
<td>Pain continues for 48 hours to &lt; 72 hrs</td>
</tr>
</tbody>
</table>
Site of pain (Lower Abdomen pain, Back pain, Pain radiating to thighs)  
| No pain | Presence of all 3 for less than 1hr or any 2 features for less than 6hrs or any 1 feature for less than 12h | Presence of all 3 for 1-2 hrs or any two features for 612hrs or any one feature for more than 12hrs | Presence of all 3 for more than 2hrs any two features for 12-24hrs any 1 feature for 24hrs |

Associated complaints (Nausea, vomiting, diarrhea, headache, irritability, constipation, breast tenderness)  
| No associated complaints | 1-3 Complaints (Mild) | 4-6 Complaints (Moderate) | >6 complaints (Severe) |

Nature of pain  
| 0 (pain absent) | Occasional | Intermittent | Continuous |

**Overall assessment:** The total effect of the therapy was assessed considering the overall improvement in signs and symptoms.

- **Marked improvement:** 76%-100% relief in the signs and symptoms
- **Moderate improvement:** 51%-75% relief in the signs and symptoms
- **Mild improvement:** 26%-50% relief in the signs and symptoms
- **Unchanged:** Below 25% relief in the signs and symptoms

**Statistical analysis**
- Central tendencies and dispersions were measured using Mean, Median, Standard Deviation, Standard Error and Quartiles.
- Test of significance was done using Wilcoxon signed-rank test and Mann-Whitney U test

**Assessment of total effect of therapy**

**Table 3: Comparative results of Group A and Group B.**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>BT-AT Mean</th>
<th>% of relief</th>
<th>Mann-Whitney U test</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
<td>Group B</td>
<td>Group A</td>
<td>Group B</td>
</tr>
<tr>
<td>Intensity of pain</td>
<td>3.947</td>
<td>3.368</td>
<td>41.4%</td>
<td>52.6%</td>
</tr>
<tr>
<td>Duration of pain</td>
<td>1.158</td>
<td>1.368</td>
<td>48.8%</td>
<td>42.2%</td>
</tr>
<tr>
<td>Site of pain</td>
<td>1.105</td>
<td>1.368</td>
<td>53.3%</td>
<td>40.9%</td>
</tr>
<tr>
<td>Associated complaints</td>
<td>1.526</td>
<td>1.474</td>
<td>46.7%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Nature of pain</td>
<td>1.263</td>
<td>1.474</td>
<td>29.3%</td>
<td>36.4%</td>
</tr>
</tbody>
</table>
Table no. 4: The overall effect of treatment in Group A.

<table>
<thead>
<tr>
<th>Class</th>
<th>Grading</th>
<th>No. of pts</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 25%</td>
<td>Unchanged</td>
<td>1</td>
<td>5.3</td>
</tr>
<tr>
<td>26-50%</td>
<td>Mild Improvement</td>
<td>16</td>
<td>84.2</td>
</tr>
<tr>
<td>51-75%</td>
<td>Moderate Improvement</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>76-100%</td>
<td>Marked Improvement</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table no. 5: The overall effect of treatment in Group B.

<table>
<thead>
<tr>
<th>Class</th>
<th>Grading</th>
<th>No. of pts</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 25%</td>
<td>Unchanged</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>26-50%</td>
<td>Mild Improvement</td>
<td>17</td>
<td>89.5</td>
</tr>
<tr>
<td>51-75%</td>
<td>Moderate Improvement</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>76-100%</td>
<td>Marked Improvement</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**DISCUSSION**

*Udavartini yonivyapad* is a very common complaint seen in gynaecological OPDs. In extreme cases this interferes with day today activities of sufferer. Thus they seek the treatment most. Nearly 50% of the adult female population suffer from various degrees of pain abdomen during menstruation.

According to Ayurveda, the clinical entity characterized by pain, difficult expulsion of menstrual blood due to upward movement of *rajas* (menstrual blood) propelled by vitiated *vata*. The upward movement is called as *Udavrittam* Due to movement of flatus etc., natural urges in reverse direction, the aggravated vayu (*Apana vayu*) moving in reverse direction fills *yon* (uterus). This *yon* seized the pain, initially throws or pushes the *rajas* (Menstrual blood) upwards, then discharges it with great difficulty. The lady feels relief immediately following discharge of menstrual blood. Since in this condition *rajah* (Menstrual blood) moves upwards or in reverse direction, hence it is termed as *Udavartini*.

**Discussion on probable action of *Pachotti Kuvaladi Kashaya***

*Pachotti kuvaladi Kashaya* is mentioned in *Sahasrayoga* under the context of *Kashaya prakarana*.

Based on *rasa*

- **Katu** and **Tikta rasa** having *Deepana* properties which in indicated in *Agnimandhya*.
- **Katu rasa** is *Srotoshodhaka* as it poses *sukshma guna* and also *Garbhashaya shudhikara*
- **Tikta rasa** is *kapha shoshaka* so it helps to remove the *Avarana*
- **Madhura rasa** has *Vata Kapha hara* properties, also act as *Jeevaniya, Balya, Brihamaniya*
Based on guna

✓ **Lodhra, Bilwa, Bharangi** has Laghu, Ruksha guna. While **Yashti and Tila** has guru snigdha guna.

✓ **Laghu and snigdha guna** has Tridoshara properties.

✓ Most of the drugs in *Pachotti kuvaladi Kashaya* is ushna veerya so it helps in vatashamaka, Vatanulomna, Vedana sthapana, Shoolahara.

Based on vipaka

✓ All the drugs are having Madhura, katu vipaka, which act as Vatashamaka

Based on karma

✓ Helps in Deepana and Pachana which further corrects the agni

✓ **Lodhra** has property of raktashudhikara also has antiinflammatory and analgesic activity.

Few studies shows that it also has anticancer activity – evaluated the chloroform, butanol and ethyl acetate bark extracts for their cytotoxic activity determined using XXT salt based cytotoxicity assay in 96-micro plate format against one leukaemia and one cervical cancer cell line.

✓ **Bilwa** poses antiinflammatory, antioxidants properties. Studies have shown the evidence of presence of various chemical constituents. Coumarins like marmin, marmesinin, umbeliferone, and triterpenes like beta sitosterol and lupeol were identified. Marmin, a coumarin isolated from the roots of *Bilwa* showed anti-inflammatory effect against carrageenan induced inflammation in rats.

✓ **Bharangi** has vaso relaxant activity, Immunestimulating, Antifibrotic effects

Study investigated a combination regimen of Salvia miltiorrhiza((S), Glycyrrhiza glabra (G), Lingusticum chuanxiong (L) exertred in vivo antifibrotic effects on rats with hepatic fibrosis.

✓ By some research it is observed that **Yashtimadhu** shows good results in acute and chronic inflammatory condition.

✓ **Tila**- helps to reduce Yonishoola. Also possess sukshma guna and had properties of yogavahi which helps in cleansing srotas.

It is an antioxidant as it contains vitamin and also has a purgative action hich helps in constipation
**Discussion on probable mode of action of saptasara**

*Saptasara kashaya* is mentioned in *Sahasrayoga* under the context of *gulma prakarana*.

- It is indicated in *vibandha, Agnimandhya, gulma, yonishoola*.
- Widely used in *Arthavakshaya, Nashtarthava, Udavartini yonivyapad*.
- It contains drugs which are *vatanulomana, Srotoshodhaka, Kaphavata hara* hence helps to correct menstrual irregularities.
- Majority of drugs are have *katu, tikta rasa and laghu, ruksha, tikshna guna* by which *vata kapha vaiguna* are managed.
- Drugs like *Punarnava, Bilwa* are *Srothoshodhaka, Shothahara* properties
- *Kultha* is *pitta raktakruth, medohara*
- According to *Acharya Charaka* and in *kaiyyadeva*
- *Nighantu*, it possesses *vatanulomana pramehagha* property.
- Pharmacological studies proved that it has antispasmodic, antidiabetic and anti hypercholesteremic effect; the flavonoids in it has analgesic activity.
- *Eranda* is *bhedaniya, Angamarda prasamaneeya* and *vatahara*. *Acharya Susrutha* mentioned *srothovishodhana, yoni vishodhana, adhobhaga dosahara*. so it acts on *apana vayu vaigunya*. Also it is *shoolaghna* and *vataharam param* and hence relieves pain during menstruation so helps in *Udavartini yonivyapad*.
- *Sahachara* is *vatahara* and its correct *gati* of *apana vata*
- *Shunthi* and *Agnimantha* helps in *ama pachana* and removes *avarana* of *strotas* and helps *apana vayu anulomana*.
- Most of the drugs possess fibrinolytic
- Property which reduces the formation of clots during menstruation which in reduces the pain.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>% of relief</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensity of pain</td>
<td>41.4%</td>
<td>52.6%</td>
</tr>
<tr>
<td>Duration of pain</td>
<td>48.8%</td>
<td>42.2%</td>
</tr>
<tr>
<td>Site of pain</td>
<td>53.3%</td>
<td>40.9%</td>
</tr>
<tr>
<td>Associated complaints</td>
<td>46.7%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Nature of pain</td>
<td>29.3%</td>
<td>36.4%</td>
</tr>
</tbody>
</table>
CONCLUSION
Pain is body’s most important alarm system because it draws attention to the fact that something is at fault. Due to stressful and modern lifestyle, unhealthy food habits etc as mentioned in our classics. Dysmenorrhea symptoms are most commonly seen in adolescent age group. The aim of this study was to compare and to evaluate the effect of Pachotti kualadi kashaya and Saptasara kwatha, a classical formulations indicated in Artavashoola. Results shows that there is significant result within the group therefore the drug shows improvement in parameters before treatment to after treatment On comparison between group comparison shows no statistically significant differences in effect of treatment p value showing (p=>0.05).

REFERENCES
5. Acharya Bramhanand Tripathi, Charak Samhita, Chaukambha Sanakrita Sansthyan, Varanasi, 78.
7. Journal of Ayurveda & Holistic Medicine, 2017; V: IV.
11. The constituents of Medicinal plants, an introduction to the chemistry and therapeutics of herbal medicines, by Andrew Pengeley, first south Asian, 2006.