

## A COMPARATIVE CLINICAL STUDY OF PALASHA TWAK KASHAYA AND SAPTASARA KASHAYA IN UDAVARTINI YONIVYAPAD

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### ABSTRACT

Today's stressful modern life style affects women's health physically and psychologically specially during reproductive phase. When menstruation turns painful which cause immense amount of physical debility and mental distress to the woman that may ultimately affect her social and daily routine activities. Menstrual pain without organic pathology is considered as primary dysmenorrhoea which may be associated with complaints like nausea, vomiting, diarrhoea, constipation and fainting. Normal function of *Apana Vayu* is the expulsion of *Artava* (Menstrual blood) without any discomfort, *Vikruti* in *Apana Vayu* causes upward or reverse direction of *raja* leading to painful menstruation called as *Udavartini Yonivyapad*, characterized as primary dysmenorrhoea. Hence, all measures capable of suppressing *Vata* are indicated. Owing to the gravity of situation and keeping above mentioned facts in consideration the present study is undertaken to evaluate the clinical efficacy of "*Palasha twak Kashaya*" in *Udavartini*

*Yonivyapad* w.s.r. to Primary Dysmenorrhoea. **Aim:** To evaluate the role of ayurveda oral medications in *Udavartini Yonivyapad* (Primary Dysmenorrhea). **Objectives:** To compare the clinical efficacy of *Palasha Twak Kashaya* and *Saptasara Kashaya* in management of *Udavartini Yonivyapad*. **Methodology:** A randomized comparative clinical study of 40 patients suffering from *Udavartini Yonivyapad*, were randomly selected through lottery method and categorized into 2 groups of 20 patients each. Group A was treated with *Palasha Twak Kashaya* (50ml bd *Apana kala* i.e., before food) and group B with *Saptasara Kashaya*

(50ml bd before food) with *Sukhoushna Jala* as *Anupana*. **Duration of treatment:** 10 days (Starting 7days before the commencement of cycle till 3rd day of the menstrual cycle) for 2 consecutive cycles. **Results and Interpretation:** Both the groups showed statistically significant results. Statistically, there was no significant difference between the groups. **Conclusion:** Both *Palasha Twak Kashaya* and *Saptasara Kashaya* were equally effective in treating *Udavartini Yonivyapad*.

**KEYWORDS:** *Ayurveda*, *Udavartini Yonivyapad*, Primary dysmenorrhoea, *Palasha Twak Kashaya*, *Saptasara Kashaya*.

## INTRODUCTION

Dysmenorrhea is a Greek term for “Painful monthly bleeding”. It is characterized by severe uterine pain during menstruation which limits normal activities, or require medication.

Dysmenorrhea affects 40-70% of women of reproductive age, and affects daily activities in up to 10% of women.<sup>[1]</sup> 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.<sup>[2]</sup> The etiology of primary Dysmenorrhea is not precisely understood, but most symptoms can be explained by the action of uterine prostaglandins, particularly PGF<sub>2</sub> $\alpha$  during endometrial sloughing, the disintegrating endometrial cells release PGF<sub>2</sub> $\alpha$  as menstruation begins PGF<sub>2</sub> $\alpha$  stimulates myometrial contraction, ischemia and sensitization of nerve endings.<sup>[3]</sup>

According to ayurveda, “*Na hi Vaatadrite Shoolam*” which means pain is the indication of *vata vikruti* and *Apana vata* is involved. Normal menstruation is the function of *Apanavata*, so the painful menstruation is considered as *Apanavatadushti*.<sup>[4]</sup>

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*.<sup>[5]</sup> The lady feels relief immediately following discharge of menstrual blood.

An attempt is been made to treat the condition with *Palasha twak Kashaya* is the yoga mentioned in *Sahasrayoga*. The indication of these drugs is given in *Artavashodhana* which acts as *vata shamaka*, *vata anulomaka* and *shoolahara* properties.<sup>[6]</sup>

Till date no study has been done on *Palasha twak Kashaya* considering the above factors an attempt is made to compare the effect of *Palasha twak 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, Moodubidire, 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* full filling the inclusion criteria 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 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 16-25 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 2 consecutive cycles.

**Group A** - Given with *Palasha twak Kashaya* 50ml BD before food with an equal amount of lukewarm water.

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

**f) Observation period**

The Total Duration of Treatment: 2 months

Treatment Period: 10 days

**Days of assessment:** 4<sup>th</sup> day of each menstrual cycle for 2 consecutive cycles.

**Follow up:** 4<sup>th</sup> day of 3<sup>rd</sup> cycle.

**g) Assessment criteria**

Following parameters are assessed by using WALIDD SCORE

- Working ability
- Location of pain
- Intensity of pain
- Days of pain

Pain was assessed by using Wong Baker's Scale

- Associated complaints – Nausea, vomiting, loose stools

## Wong's Baker Scale

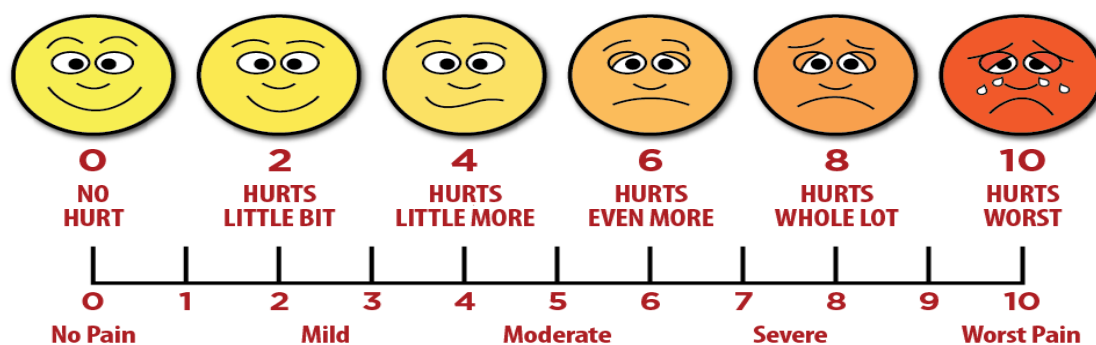


Table 2: Assessment criteria WALIDD score.

Assessment criteria	Grade 0	Grade 1	Grade 2	Grade 3
Working ability	0: none	1: almost never	2: almost always	3: always
Location of pain (lower abdomen pain, back pain, pain radiating to thighs)	0: none	1: 1 site	2: 2-3 sites	3: 4 sites
Intensity of pain	0: does not hurt	1: hurts a little bit	2: hurts even more	3: hurts worst
Days of pain	0: 0 days	1: 1-2 days	2: 3-4 days	3: $\geq 5$ days

**Dysmenorrhea score:** - 0: Without dysmenorrhea, 1-4 mild dysmenorrhea, 5-7 moderate dysmenorrhea, 8-12 severe dysmenorrhea.

**Associated complaints:** (Nausea, vomiting, diarrhoea, headache, irritability, breast tenderness)

**Grade 0:** No associated complaints,

**Grade 1:** 1-3 Complaints (Mild)

**Grade2:** 4-6 Complaints (Moderate),

**Grade 3:** >6 complaints (Severe)

**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 symptom

**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.**

Parameters	BT-AT Mean		% of relief		Mann- Whitney U test		Remarks
	Group A	Group B	Group A	Group B	T value	P-value	
Working ability	1.000	2.000	65.11%	68%	380	0.423	NS
Location of pain	1.000	1.000	57.9%	61.53%	408	0.967	NS
Intensity of pain	2.000	2.000	69.81%	70.5%	416	0.882	NS
Days of pain	1.000	1.000	62.22%	50%	516	0.002	SS
Associated complaints	1.000	2.000	63.04%	72.34%	360	0.179	NS

**Table no. 4: The overall effect of treatment in Group A.**

Class	Grading	No. of pts	Percent
≤ 25%	Unchanged	1	5
26-50%	Mild Improvement	15	75
51-75%	Moderate Improvement	4	20
76-100%	Marked Improvement	0	0

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

Class	Grading	No. of pts	Percentage
≤ 25%	Unchanged	0	0
26-50%	Mild Improvement	12	60
51-75%	Moderate Improvement	7	35
76-100%	Marked Improvement	1	5

## DISCUSSION

Painful menstruation is the cardinal feature in both primary Dysmenorrhea and *Udavartini Yonivyapad*. *Udavartini* is a *Vata Pradhana Yonivyapad*. Here, *Apana* and *Vyana Vayu* is specially involved which may be aggravated due to indulgence in *vata prakopaka ahara-vihara* and *Vegavarodha* and thus becomes a painful cycle. In Ayurvedic classics, great importance has been given to quality, quantity, purity, consistency, intermenstrual period, duration of *artava* and *artava* that is devoid of pain and burning sensation, to understand *shudha artava Laksanas*. Thus, the focus of Ayurvedic management of Dysmenorrhea is to correct *Agni*, neutralization of *Ama* leading to formation of *Shuddha Artava* which is easy to be expelled from the unobstructed channels by the coordinated activity of *Vayu*.

According to modern, Dysmenorrhea is most common gynaecological problem mainly in adolescence period. It is defined as painful menstruation of sufficient magnitude so as to incapacitate the day-to-day activities.<sup>[7]</sup> Dysmenorrhea can be classified as primary and secondary. In the former type there is no pelvic pathology while the latter implies underlying pathology which leads to painful menstruation. This does not require any treatment when it is in milder form. While discussing the pathology of Primary Dysmenorrhea, understanding the physiological changes in the menstrual cycle is also important, especially in the secretory phase. After the ovulation and formation of corpus luteum, level of progesterone increases in the secretory phase. In the absence of fertilization, corpus luteum starts to regress and the level of progesterone falls at about day 22 in a cycle of 28 days.<sup>[8]</sup> Due to the progesterone withdrawal, menstruation occurs and triggers the production of prostaglandins (PGE2 & PGF2α) in the late secretory phase in Endometrium. Due to the imbalance in the prostaglandin's secretion ratio, Dysmenorrhea occurs due to myometrial contraction.<sup>[9]</sup>

Hyperactive uterine activity or muscular Inco-ordination (that results due to excessive prostaglandin (PGI2) synthesis) can also be understood as vitiation of *Vata dosha*. The general management of *Apana Vayu dushti* according to *Acharya Charaka* in *chikitsa Sthana* is “*Udanam yojayet...apanam cha anulomayet.*” As it is mentioned *Udavartini Yonivyapad* is *vata pradhana vyadhi*. The first line of treatment indicated in *vata Roga's* is *snehana*. According to *Acharya Charaka* in “*Sarva eva snehaa vaatamupaghanti*”. According to *Ashtanga Hridaya* 21st chapter *vata vyadhi chikitsa*. Th highlights the importance of *Abhyantara Snehana* in *vata pradhana vyadhi*. The *chikitsa* mentioned for *Vyana avruta apana* is also *Snigdha Anulomana*.

### Mode of action of *palasha twaka kashaya*

*Palasha twak Kashaya* is mentioned in *Sahasrayoga* under the context of *Artava Shodhana*. The drug *Palasha* has *Kashaya*, *Katu*, *Tikta*, *Madhura rasa*. *Katu* and *Tikta rasa* having *Deepana* properties which in indicated in *Agnimandya*. *Katu rasa* is *Srotoshodhaka*. *Tikta rasa* is *Kapha shoshaka* so it helps to remove the *Avarodha*. *Palasha* has *laghu* and *snigdha Guna*, *Sara Guna*. *Snigdha guna* which nullifies ruksata of *vata* and maintains *vata* in normal condition. *Sara guna* decreases *kapha* thus removing *kaphenavruttam artavam* due to which it leads to normal flow of *artava*. Drug is *ushna veerya* so it increases *agneyatva* in the body and *vata* and *kapha shaamaka* hence results in normal flow of *artava* by removing *Avarodha* by *kapha* and normalising *vikruta gati of vata*. It is *kaphavatahara* so because of *karma* it



leads to *vatahara* and reliefs *shoola*. It poses anti-inflammatory, analgesic activity and antioxidants properties. By research it is observed that *palasha* methanolic extract from the dry stem bark of *palasha* shows anti-inflammatory and analgesic effect.<sup>[10]</sup> It contains butrin and kino-tannic acid which act as potent analgesics, butrin inhibits prostaglandin synthesis and a probable central inhibitory mechanism. It also contains butolic acid which inhibits pro-inflammatory immune cells and activate anti-inflammatory immune cells thereby decreasing inflammation.

### Mode of action of *saptasara kashaya*

*Saptasara Kashaya* is mentioned in *Sahasrayoga* under the context of *Gulma prakrana*. It is indicated in *vibandha*, *Agnimandya*, *Gulma*, *yonishoola* and widely used in *Artavakshaya*, *Nashtarthava*, *Udavartini Yonivyapad*. It contains drugs which are *vatanulomana*, *Srotoshodhaka*, *Kaphavatahara* hence helps to correct menstrual irregularities. Majority of drugs are having *Katu*, *Tikta rasa* and *laghu*, *ruksha*, *Tikshna guna* by which *vata kapha vaiguna* are managed. Drugs like *Punarnava*, *Bilwa* are *Srotoshodhaka*, *Shothahara* properties. *Kultha* is *pitta raktakruta*, *medohara* according to *Acharya Charaka* and in *kaiyyadeva Nighantu*, it possesses *vatanulomana*, *pramehaghna* property. Pharmacological studies proved that it has antispasmodic, antidiabetic and anti-hypercholesteremic effect; the flavonoids in it have analgesic activity. *Eranda* is *bhedaniya*, *Angamarda prasamaneeya* and *vatahara*. *Acharya Susruta* mentioned *srotovisodhana*, *yoni visodhana*, *adhobhaga doshahara*. 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 *vata hara* and it corrects *gati* of *apana vata*. *Shunthi* has *Gingerol* shows anti-inflammatory also it suppresses prostaglandin synthesis through inhibition of cyclooxygenase-1 and cyclooxygenase-2. *Shunthi* and *Agnimantha* helps in *ama pachana* and removes *avarodha* of *strotas* and helps *apana Vayu anulomana*. Most of the drugs possess fibrinolytic property which reduces the formation of clots during menstruation which in turn reduces the pain.

**Table 6**

Parameters	% of relief		P-value
	Group a	Group b	
Working ability	65.11%	68%	0.423(NS)
Location of pain	57.9%	61.53%	0.967(NS)
Intensity of pain	69.81%	70.5%	0.882(NS)
Days of pain	62.22%	50%	0.002(SS)
Associated complaints	63.04%	72.34%	0.179(NS)



## CONCLUSION

Due to stressful and modern lifestyle, unhealthy food habits and not following proper regimen as mentioned in our classics. Dysmenorrhea symptoms are most commonly seen in adolescence age group. The first line of treatment for Dysmenorrhea is said to be nonsteroidal anti-inflammatory drugs and combined oral contraceptives. So, it is need of hour to have potent, safe, cost effective, easily available oral remedy from Ayurveda science.

The aim of this study was to compare and to evaluate the effect of *Palasha Twak Kashaya* and *Saptasara Kashaya*, a classical formulation 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 with P value showing (P=0.285).

Hence H<sub>0</sub> is accepted i.e., H<sub>0</sub>- There is no significant difference in the effect of *Palasha Twak Kashaya* and *Saptasara Kashaya* in *Udavartini Yonivyapad*.

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