

A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF VRIKSHAMLA TWAK KASHAYA AND DASHAMoola KASHAYA IN UDAVARTHINI YONIVYAPAT

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<https://doi.org/10.46607/iamj0309102021>

(Published Online: October 2021)

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Article Received: 22/09//2021 - Peer Reviewed: 06/10/2021 - Accepted for Publication: 07/10/2021



ABSTRACT

Menstruation is a physiological, natural event in the reproductive stage of the female. Due to a sedentary lifestyle and lack of self-care, stress, untimely food and other factors, many gynaecological problems occur and one of the most common among them is Dysmenorrhea. Painful menstruation is the most common cause which disturbs the mental state of the woman also affecting her day to day activities during the cycle. Pain is the *Pratyatma Lakshana* of *Vata vikruti* mentioned in Ayurveda. *Artava Nishkramana* is the normal function of *Apana vayu* which moves in *Pratiloma gati* and obstructs the pathway of *Artava*. In our Classics, most of the gynaecological problems are discussed under *Yonivyapat*. *Udavartini Yonivyapat* can be co-related and defined as painful menstruation i.e. Dysmenorrhea. Considering the prevalence of dysmenorrhea in the present era, the trial drug *Vrikshamla*

twak kashaya which possess the properties such as *Shoolprashamana* and *Vatahara* was selected to evaluate its effect in the management of *Udavartini yonivyapat*. **Objectives:** To compare and evaluate the effect of *Vrikshamla Twak kashaya* and *Dashamoola kashaya* in *Udavarthini yonivyapat* w.r.s primary dysmenorrhea. **Methodology:** This research work was a randomized comparative clinical study of 40 patients suffering from symptoms of *Udavartini Yonivyapat*, who were randomly selected and categorized into 2 groups of 20 patients each. Group A was treated with *Vrikshamla Twak kashaya* and group B with *Dashamoola Kashaya*. Both *Kashayas* were given in *Apanakaala* (before food) with *Sukhoshna Jala* as *Anupana*. **Duration of Treatment:** 10 days (Starting 7days 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 *Vrikshamla Twak kashaya* and *Dashamoola Kashaya* had an equal effect in treating *Udavartini Yonivyapat*.

Keywords: *Udavartini*, Dysmenorrhea, *Vrikshamla Twak Kashaya*, *Dashamoola kashaya*.

INTRODUCTION

Dysmenorrhea or painful menstruation is the commonest complaint of the woman nowadays that which is increasing cycle to cycle with increased medications too into the body. It takes the definition as, the painful menstruation of sufficient magnitude so as to capacitate day-to-day activities¹. There are 2 types of dysmenorrhea - a) Primary dysmenorrhea- without any pelvic pathology and b) Secondary dysmenorrhea- with pelvic pathology² This is more common in women between the ages of 18-24 years. The study says that Dysmenorrhea is more in unmarried than in married women (61% v/s 51%)³. In India, incidence and prevalence show the report as 33.5% and 87.8% respectively. The treatment for this condition is still unsatisfactory in conventional medicine, although non-steroidal anti-inflammatory drugs are tolerated well and seen leaving behind the side effects⁴. According to our classics “*Na hi Vaatadrite Shoolam*” that which means pain is the indication of *Vata vikriti* and *Apana vata* is the main culprit in all gynaecological disorders. Normal menstruation is the function of *Apanavata*, so painful menstruation is considered as *Apanavatadushti*⁵.

In *Udavartini Yonivyapat* due to *Prathiloma Gati* of *Apanavayu* because of *Swaprakopa Nidhanas* like *Vataprakopa Ahara vihara* and *Vegadarana*, it leads to *Rajah krichrata* or even *Vyana avruta apana* causes *Margavarodha* or even *Upalepa* of *Arthava vaha srothas* which is caused by *Kapha Vardhaka Ahara*

Vihara that which creates *Avarodha* to *Gati* of *Apanavayu* resulting in painful menstruation.

Keeping this into consideration and as per treatment principles of *Udavartini* study has been done to compare the effect of *Vrikshamla Twak kashaya*⁶ and *Dashamoola Kashaya*⁷ in the management of *Udavartini Yonivyapat*.

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 *Udavarthini Yonivyapat* fulfilling 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.

- 1) Painful menstruation begins with the onset of menstruation and lasts for 1 to 2 days.
- 2) Painful menstruation is associated with Pain in the suprapubic region, lower abdomen and low backache which radiates to the thighs
- 3) Painful menstruation is associated with symptoms like nausea, vomiting, loose stools, fatigue, constipation, giddiness and headache.

c) Inclusion Criteria:

- 1) Patients fulfilling the diagnostic criteria
- 2) The age group between 16-25 years

- 3) H/O painful menstruation for at least 3 consecutive menstrual cycles
- 4) patients with regular menstrual cycles

d) Exclusion Criteria:

- 1) Cases of secondary dysmenorrhea with pelvic pathologies like ovarian cyst, Fibroid uterus and Endometriosis.
- 2) Patients on hormonal therapy.
- 3) Patients with vaginal atresia, cervical stenosis and Retroverted-uterus.
- 4) Patients with systemic diseases.
- 5) Patient with IUCD.

e) Interventions:

Treatment was started 7 days before expected menstruation and was continued up to another 3 days for 2 consecutive cycles.

Table 1:

GROUP	SAMPLE	YOGA	DOSE	TIME OF ADMINISTRATION	ANUPANA
A	20	Vrikshamla Twak kashaya	50ml	Before food, BD	Lukewarm water
B	20	Dashamoola kashaya	50ml	Before food, BD	Lukewarm Water

Group A - Given with Vrikshamla Twak kashaya 50ml BD with an equal amount of lukewarm water.

Group B - Given with Dashamoola 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.

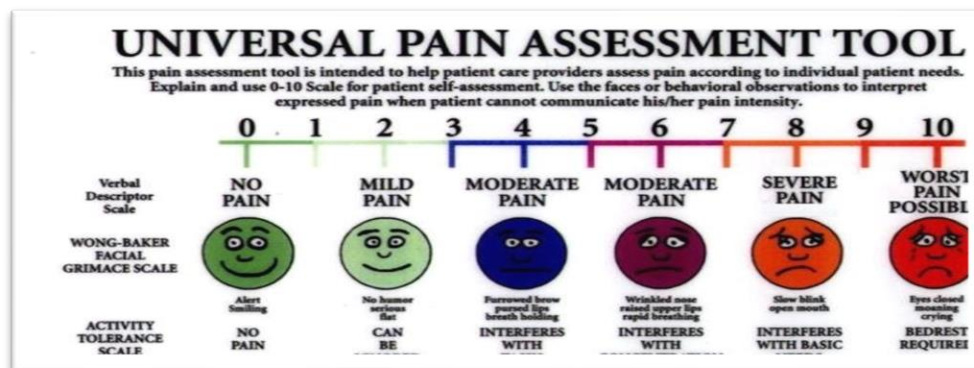
Follow up: 4th day of 3rd cycle.

g) Assessment Criteria:

- 1) The intensity of the pain
- 2) Duration of the pain
- 3) Site of the pain-Lower abdomen, Low back, Pain radiating to the thigh
- 4) Associated complaints such as-Nausea, Vomiting, Headache, Anorexia, Fatigue and loose stools

Pain criteria were assessed using VAS

These parameters were graded, and scores are given accordingly



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:

Assessment Criteria	Grade 0	Grade 1	Grade 2	Grade 3
Intensity of pain	0 (No pain) Menstruation is not painful and daily activity is unaffected	1 to 3 (Mild pain) Menstruation is painful but daily activity is not affected	4-6 (moderate pain) Menstruation is painful and daily activity is affected. An analgesic drug is needed.	7-10 (Severe pain) Menstruation is so painful that the patient is unable to do even the routine work and has to take an analgesic, but without much relief
Duration of Pain	No pain	Pain continues for up to 24 hrs.	Pain continues for 24 to < 48 hrs	Pain continues for 48 hours to <72 hrs
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 1-2hrs or any two features for 6-12hrs 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, diarrhoea, headache, irritability, constipation, breast tenderness)	No associated complaints	1-3 complaints	4-6 complaints	>6 complaints

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

Assessment of Total Effect of Therapy

Table 3: Comparative results of Group A and Group B

Parameters	BT-AT Mean		d	% of relief		Mann- Whitney U test		Remarks
	Group A	Group B		Group A	Group B	t value	p-value	
Intensity of pain	3.35	2.650	0.7	49.6%	35.8%	456	=0.218	NS
Duration of pain	0.850	0.65	0.2	39.5%	27.65%	450	=0.283	NS
Site of pain	1.05	0.6	0.45	42%	29.26%	484	=0.046	SS
Associated complaints	0.55	0.70	-0.15	42.3%	45.16%	380	=0.424	NS

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.

Table 4: The overall effect of Treatment in Group-A

CLASS	GRADING	NO. OF Pts	PERCENTAGE
<25%	Unchanged	2	10%
26-50%	Mild improvement	2	10%
51-75%	Moderate improvement	3	15%
76-100%	Marked improvement	13	65%

Table 5: The overall effect of Treatment in Group-B

CLASS	GRADING	NO. OF Pts	PERCENTAGE
<25%	Unchanged	2	10%
26-50%	Mild Improvement	1	5%
51-75%	Moderate improvement	6	30%
76-100%	Marked improvement	11	55%

DISCUSSION

As Painful menstruation is the dominant feature in both Primary dysmenorrhea and Udavartini yonivyapat, Primary dysmenorrhea may be equated with Udavartini Yonivyapat in Ayurveda. Udavartini yonivyapath is termed so due to the movement of rajas in an upward direction. Here Vata gets vitiated due to Vegadharana, moves in Viloma gati pushing the rajas in an upward direction and discharges with great difficulty. Relief from the pain is obtained following menstruation. Here, Apana and Vyana Vayu are especially involved which may be aggravated due to indulgence in Vata Prakopaka Ahara-Vihara and Vegavarodha and thus becomes a vicious cycle. Ar-tava is considered as Shuddha when menstruation is devoid of Arti, Pichhilata, Daha, and the flow is neither too less nor too more in quantity. Any variation from this normalcy causes different types of Ar-thava vyapath and Yonivyapath.

Discussion on probable action of Vrikshamla Twak Kashaya

Vrikshamla Twak kashaya is the single drug formulation mentioned in Sahasrayoga under the context of Arthava shodana and Krichra arthava.

Based on Rasa, Guna, Veerya, Vipaka and Karma:

- The drug Vrikshamla Twak possess Kashaya Rasa, Madhura Vipaka and Ushna Veerya which acts on Vata vikriti.
- It is Deepana and also acts as Vata Prashamana, Vata Anulomaka and Shoolahara in action⁸

- Does Vata Anulomana and thus helps in Anuloma gati of Vata and Raja.
- This pacifies Vata and clears Kapha in the case of Upalepa of Arthava Vaha Srothas caused due to Kaphaja Aharas. Hence helps in the easy flow of menstruation
- Its chemical constituents: volkensoflavone, marelloflavone which acts as anti-inflammatory and analgesic in action.

Discussion on the probable mode of action of Dashamoola Kashaya

Dashamoola kashaya is mentioned under the context of Udavartini yonivyapt in Sha.sam.madyama and also mentioned in Sahasrayoga under the context of Kashaya yogas for Suthika and in Yogarathnakara under Vatavyadi Chikitsa, in Bhaishajya Rathnavali under the context of Kasa Rogadikara and also in Ashtanga Hridaya under the context of Annaswarupiya Adyaya.

KASHAYA: Though the term Dashamoola is described many times by Caraka, drugs of this group has been specified by Sushruta, which includes both Laghu and Bruhat Panchamoola. Charaka has included these ten drugs under Vatahara drugs, Shothahara Dashemani and Pancha-panchamoola.

- ✓ Most of the drugs in Dashamoola have got Madhura & Kashaya Rasa, Laghu Ruksha Guna, Ushna Veerya, Madhura Vipaka, which mainly act on Vata vikriti.
- ✓ Madhura Rasa, Laghu Guna and Madhura Vipaka help to pacify vitiated Vata, Kashaya rasa and

Ushna Veerya does the action of *Amapachana* & cleanses the *Srotas*.

- ✓ Pharmacologically *Dashamoola* is having Analgesic, Anti-inflammatory, Antipyretic action which has been reported by gupta (1986) which in turn helps in reducing prostaglandin secretion.
- ✓ *Kantakari* is anti-inflammatory in action, also used in constipation. Leaves are used locally to relieve pain.
- ✓ *Shalaparni* had a relaxant effect on the smooth muscles of intestines of dog, rabbit and isolated rat Uterus according to the study

- ✓ *Bilva* contributes to its analgesic activity by the destruction of the mediators of inflammation such as 5-hydroxy tryptamine, bradykinin, histamine, prostaglandins etc. A significant resistance against mechanical pain indicates potent analgesic activity.
- ✓ *Dashamoola* acts as anti-platelet potential and prostaglandin synthesis inhibition in turn it reduces the clots and pain during menstruation⁹.

Table 6:

PARAMETERS	% OF RELIEF		P-VALUE
	GROUP A	GROUP B	
Intensity of pain	49.6%	35.8%	0.218 (NS)
Duration of pain	39.5%	27.65%	0.283 (NS)
Site of pain	42%	29.26%	0.046 (SS)
Associated complaints	42.3%	45.16%	0.424 (NS)
Overall %	43.35%	34.46%	

CONCLUSION

The aim of this study was to evaluate the effect of *Vrikshamla Twak kashaya* and *Dashamoola Kashaya* in *Udavartini Yonivyapat*. Both the *Kashayas* has got *Vatanulomana* properties that are found to be very effective in relieving the intensity, duration and site of pain and in associated complaints of irritability, headache, nausea, vomiting and diarrhoea. In comparison between the groups, both groups showed significant improvement in the management of signs and symptoms of *Udavartini Yonivyapat*. Both *Vrikshamla Twak Kashaya* and *Dashamoola Kashaya* were effective in the treatment of *Udavartini Yonivyapat* with a statistically highly significant result with $p < 0.001$. On comparison between 2 groups, there was no statistically significant difference in the effect of treatment p -value showing ($P = > 0.05$).

Hence the null hypothesis H_0 is accepted i.e. H_0 - There is no significant difference between the effect of *Vrikshamla Twak Kashaya* and *Dashamoola Kashaya* in *Udavartini yonivyapat*.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Sahana G et al: A Comparative Clinical Study To Evaluate The Effect Of Vrik-Shamla Twak Kashaya And Dashamoola Kashaya In Udavarthini Yonivyapat. International Ayurvedic Medical Journal {online} 2021 {cited October 2021} Available from:
http://www.iamj.in/posts/images/upload/2303_2309.pdf