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A COMPARATIVE CLINICAL STUDY OF PANCHAPALAKA GHRITA AND DHANYAKA GHRITA IN UDAVARTINI YONIVYAPAD

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ABSTRACT

Background and Objectives: Menstrual cycle is the natural regular change occur in the female reproductive system. Menstruation is often associated with problems of irregular menstruation, disorders in menstrual bleeding and dysmenorrhoea, among which dysmenorrhoea is the most common gynecological problem. Dysmenorrhoea is painful cramps of uterine origin. If it is severe it causes high impact on women's life. It leads to restriction in daily activities, a lower academic performance in adolescents, and poor quality of sleep and has negative effects on mood causing anxiety and depression.

In Ayurveda 20 types of *Yoni Vyapada* are described out of which *Udavartini* is one which is characterized by painful menstruation and can be correlated with primary dysmenorrhoea.

Objectives: To evaluate and compare the efficacy of *Panchapalaka Ghrita* and *Dhanyaka Ghrita* in the management of *Udavartini Yonivyapad*.

Methodology: This research work was a randomized comparative clinical study of 40 patients suffering from cardinal symptoms of *Udavartini*, were randomly selected and categorized into 2 groups of 20 patient each. Group A was treated with *Panchapalaka Ghrita* and group B with *Dhanyaka Ghrita*. Both *Ghritas* were given in *Apanakaala* (before food) with *Sukhoshna Jala* as *Anupana*.

Duration of Treatment- 10 days (Starting 7days before commencement of cycle till 3rd day of menstrual cycle) for 3 consecutive cycle.

Results and Interpretation- Both the groups showed statistically significant results. Statistically there was no significant difference between the groups

Conclusion: Both Panchapalaka Ghrita and Dhanyaka Ghrita has equal effect in Udavartini Yonivyapad.

Keywords: *Udavartini*, Dysmenorrhea, *Panchapalaka Ghrita*, *Dhanyaka Ghrita*.

INTRODUCTION

Menstrual problems such as dysmenorrhoea, irregular menstrual cycles, irregular bleeding are common gynecological complaints among adolescent girls which creates physical and psychological disturbances in day-to-day life. Dysmenorrhoea is common and in up to 20% of women, it may be severe enough to interfere with day-to-day activities¹.

Dysmenorrhoea is defined as painful menstruation of sufficient magnitude to incapacitate day-to-day activities. It is divided into Primary dysmenorrhoea and Secondary dysmenorrhoea. The Primary dysmenorrhoea is one where there is no pelvic pathology, and Secondary dysmenorrhoea is considered menstruation-associated pain occurring in the presence of pelvic pathology².

The prevalence of dysmenorrhea is most common in women between the ages of 16- 25 years. About 80% of the women develop dysmenorrhea within 3 years of menarche.

According to Ayurvedic classics, a number of gynecological problems are described under the heading of *Yonivyapad*. Primary dysmenorrhoea can be correlated with *Udavartini Yonivyapad*, which is characterized by painful menstruation³. For all *Yoni Vikaras* vitiated *Apana Vayu* is considered as primary cause. *Apana Vata* does *Artava nishkramana kriya*, so painful menstruation is considered as *Apanavata Dushti*⁴.

In *Udavartini Yonivyapad* due to *Swaprakopaka Nidanas* like *Vegadharana* and *Vataprakopaka Ahara Vihara* causes *Pratiloma Gati* of *Apana Vata* leading to *Raja Krichrata*. Both *Panchapalaka Ghrita* and *Dhanyaka Ghrita* are *Yogas, which* contains drugs having *Vata Anulomana, Dipana, Pachana, Balya* and *Shoolahara* properties.

Keeping this into consideration and as per treatment principles of *Udavartini* study has done to compare the effect of *Panchapalaka Ghrita*⁵ and *Dhanyaka Ghrita*⁶ in the management of *Udavartini Yonivyapad*.

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Materials and Methods:

Collection of Sources: 40 samples were selected randomly from OPD of PTSR dept 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 local market and *Ghrita* was prepared at Alvas RSBK laboratory

For Panchapalaka Ghrita:

- Kalka dravyas Sunti, Pippalimoola, Dadima, Dhanyaka.
- Sneha Dravya Ghrita
- Drava Dravya Ksheera.

For Dhanyaka Ghrita:

- Kalka Dravya Jeeraka
- Sneha Dravya Ghrita
- Drava Dravya Dhanyaka Kashaya.

Panchapalaka Ghrita and Dhanyaka Ghrita were prepared in Mandagni according to Ghritapaaka Vidhi of Bhaishajya Kalpana till attaining Sneha Siddha Lakshana.

Anupana – Sukoshna Jala

Diagnostic Criteria

Patients fulfilling any of the following diagnostic criteria were selected for the study, irrespective of associated symptoms.

- 1. Painful menstruation which begins one or two days before menstruation or with onset of menstruation and lasting for few hours or 1 to 2 days.
- 2. Painful menstruation along with pain in the lower abdomen and low back area which is radiating to the medial aspects of thighs.

3. Painful menstruation associated with any of the symptoms such as headache, nausea, vomiting, irritability, diarrhea, fatigue, giddiness.

Inclusion Criteria:

- 1) Patients fulfilling the diagnostic criteria.
- 2) Age between 16-30 years.
- 3) Married and unmarried.
- 4) H/O Painful menstruation for at least 3 consecutive cycles
- 5) Patients with regular menstrual cycles.

Exclusion Criteria:

- Cases of Secondary dysmenorrhea with pelvic pathology like Fibroid Uterus, Ovarian Cyst, Endometriosis, Adenomyosis, Pelvic inflammatory diseases, Cervicitis.
- 2) Patient on hormonal therapy, contraception and IUCD.
- 3) Patients having any systemic diseases like Diabetes Mellitus, Hypertension
- 4) Endocrinal disorders like Thyroid abnormalities, PCOD.

Drug Intervention:

The patients fulfilling the criteria for inclusion were randomly assigned into 2 groups A and B, each comprising of 20 patients:

Group	No. of volunteers	Yoga	Dose	Time of administration	Anupana
A	20	Panchapalaka Ghrita	15ml BD	Before food	Sukhoshna Jala
В	20	Dhanyaka Ghrita	15ml BD	Before food	Sukhoshna Jala

Duration of Treatment: 10 days (starting 7 days before commencement of menstrual cycle till 3rd day of menstruation) for 3 consecutive cycle.

Total duration of treatment: 3 months

Assessment: Done on 3rd day of each menstrual cycle for 3 Consecutive cycles

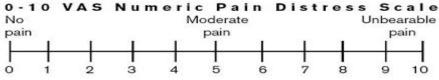
Follow up: After 1 month of treatment

Assessment Criteria:

- a) Intensity of pain
- b) Duration of pain

- c) Site of pain Lower abdomen, Low back, Pain radiating to thigh
- d) Relief in associated symptoms Vomiting, Diarrhea, Irritability, Constipation, Nausea, Headache, Breast tenderness
- Pain criteria was assessed using VAS and FLA grading and scoring system.
- These parameters were graded, and scores given accordingly.

Intensity of pain: Based on VAS Scale (Visual Analog Scoring scale)



- 1. No Pain 0
- Grade 0
- 2. Mild pain 1-3
- Grade 1
- 3. Moderate pain 4-64. Severe pain 7-10
- Grade 2
- Grade 3

FLA Scale

Each of 3 categories F (face), L(leg) and A(activity) is scored from 0-2.

This results in a total score of 0-9

FLA grading system

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Categories	0	1	2
Face	No particular expression	Distressed appearance Wrinkled Brow	Fearful expression, clenched jaw
Leg	Normal position, or relaxed	Uneasy restless Tense	Legs drown up
Activity	Normal position moves easily	Shifting back& forth, tense	Arched, rigid or jerking or rubbing body parts

Assessment criteria with grading:

Assessment Criteria	Grade 0	Grade 1	Grade 2	Grade 3
	0 (No pain)	1 to 3 (Mild pain)	4 to 6 (Moderate pain)	7 to 10 (Severe pain)
	Menstruation	Menstruation is painful	Menstruation is pain-	Menstruation is so painful
	is not painful	but daily activity is not	ful and daily activity	that patient is unable to do
1. Intensity of pain	and daily activ-	affected.	is affected.	even the routine work and
	ity is unaf-		Analgesic drug is	has to take analgesic, but not
	fected.		needed.	much relief.
2. Duration of Pain	No pain	Pain continues for up-to	Pain continues for 24	Pain continues for 48 hours
		24 hrs.	to < 48 hrs	to <72 hrs
3. Site of pain	No pain	Presence of all 3 for less	Presence of all 3 for 1-	Presence of all 3 for more
(Lower Abdomen		than 1h/ any two fea-	2h/ any two features	than 2h/ any two features for
pain,		tures for less than 6h/	for 6-12h/ any one	12-24h/ any one feature for
Back pain, Pain		any one feature for less	feature for more than	24h
radiating to thighs)		than 12h	12h	
4.Associated com-				
plaints	No associated	1-3 complaints	4-6 complaints	More than 6 complaints
(nausea, vomiting, di-	complaints			
arrhea, headache, irri-				
tability, constipation,				
breast tenderness)				

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

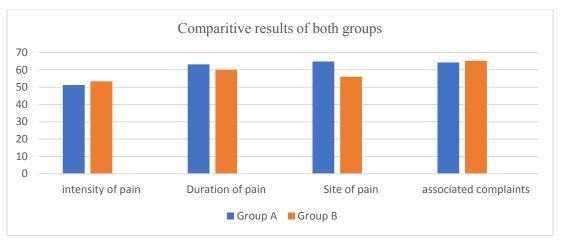
➤ Unchanged: Below 25% relief in the signs and symptoms

Statistical Analysis: The obtained data was analyzed statistically using Unpaired 't' test where conceded at the level of p<0.001 as highly significant, p<0.05 or p<0.01 as significant and p>0.01 as insignificant to carry out the results.

Assessment of Total Effect of Therapy Comparative results of Group A and Group B

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Parameters	BT-AT Mea	BT-AT Mean		% of relief		t value	P value
	Group A	Group B	d	Group A	Group B		
Intensity of pain	1.0	1.2	-0.2	51.28	53.33	-1.165	0.251
Duration of pain	1.20	1.35	-0.15	63.15	60	-0.936	0.355
Site of pain	1.2	1.15	0.05	64.86	56.09	0.263	0.794
Associated complaints	0.9	1.5	-0.6	64.28	65.21	-3.269	0.002
				60.89	58.65		



Comparative results of Group A and Group B

Overall effect of Treatment in Group-A and Group B

		Group A		Group B	
Class	Grading	No. of Patients	Percentage	No. of Patients	Percentage
<25%	No improvement	0	0%	0	0%
26-50%	Mild Improvement	6	30%	5	25%
51-75%	Moderate Improvement	8	40%	7	35%
76-100%	Marked Improvement	6	30%	8	40%

DISCUSSION

- If Apana Vata is got Avarana by Vyana that can result in causing Margavarodha that, hinder the normal flow of menses, which can result in pain.
- Kapha Vardaka Ahara Vihara result in Agnimandya and Amotpatti which cause Upalepa to Artavavaha Srotas creating Avaroda to Gati of Apana Vata which will also result in painful menstruation.
- In Udavartini Yonivyapad due to Swaprakopaka Nidanas like Mootra Vegadharana and Vataprakopaka Ahara Vihara causes Pratiloma Gati of Apana Vata leading to Raja Krichrata.

Probable Mode of Action of Panchapalaka Ghrita

Panchapalaka Ghrita is a formulation mentioned as Yoni shoolanashaka and Vata Gulmahara by Chakrapanidatta in Chakradattaa, under Gulmaroga chikitsaprakaranam and contains Pippali, Dadima, Dhanyaka, Shunti, Go Ghrita and Go Ksheera.

Based on Rasa: Katu, Tikta, Kasaya and Madhura Rasas

• Katu and Tikta Rasa Pradhana, having Dipana properties. By its Sukshma Guna, it can pierce all

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the minute channels thus *Garbhashaya Shudhi-kara*. *Tikta Rasa* is *Kapha Shoshaka* and remove the *Avarana* in *Artava Vaha Srotas*. It increases appetite, digestion and reduces nausea and vomiting.

Based on Guna: Laghu, Snigda, Ruksha, Sukshma Gunas - It is Tridoshagna, and is Sroto Shodhana and Shigrapaaki.

Based on Veerya: Ushna

 Due to *Ushna Guna* it acts as vasodilatation and thus the menstrual blood flows more easily along with *Vatanulomana*.

Based on Vipaka: Madhura, Amla

• It acts as *Vata Samaka* and thereby controls *Apana Vavu*.

Based on Karma:

- It has *Srotoshodhana* action thus it enhances the drug penetration and better absorption.
- Due to its *Dipana* and *Pachana* effect it acts as *Amapachana*, it corrects the *Agni* of patient.
- Vedanastapaka, Ruchya and Hridya properties of drugs give relief from menstrual pain and associated complaints.

Probable Mode of Action of Dhanvaka Ghrita

Dhanyaka Ghrita indicated in Yonishoola, Gudashoola, Amashoola, it is Agnideepana and Hrdya, mentioned in Ajirnadhikara of Vangasena. It contains Dhanyaka, Jeeraka and Ghrita as ingredients having properties like Vata Shamaka and Vatanulomana.

Based on Rasa, Virya and Vipaka- Katu, Tikta Rasa, Laghu, Ruksha, Sukshma Guna, Ushna Veerya, Katu and Madhura Vipaka

- Katu Rasa act as Agnideepana and Laghu Guna helps to pacify vitiated Kapha. Ushna Veerya removes Avarana and allows normal Gati of Vata.
- By Snigdha Guna and Madhura Vipaka pacifies vitiated Vata.
- *Tikta Rasa* has *Agni Vardhaka*, *Ruchya* and *Mukha Shodhaka* properties. Therefore, it increases appetite and improves digestion.

- Hridya action helps in reliving irritability and reduces nausea and vomiting.
- It has *Vrushya* action, which prepares female reproductive system for healthy ovulation and conception in upcoming *Rithukala*.

Based on Karma:

- Jeeraka act as Garbhahaya Shodhakara and Shoolaprashamana, action cures Rajah Krichrata of Udavartini. Vatanulomana brings normal Gati of Vikrita Apanavata
- Jeeraka by its Deepana, Pachana, Rochana action helps in preventing agnimandya. Kaphagna action helps to remove Ama and removes Sanga caused to Gati of Vayu.

Discussion on Result

PARAMETERS	% of relief		P Value
	Group A	Group B	
Intensity of pain	51.28	53.33	0.251 (Insignificant)
Duration of pain	63.15	60	0.355 (Insignificant)
Site of pain	64.86	56.09	0.794 (Insignificant)
Associated complaints	64.28	65.21	0.002 (Significant)
Overall %	60.89	58.65	

Ghrita itself has properties such as Udavartaprasamana, Shoolaprasamana, Vata-Pitta Prasamana, Agni deepana⁷ properties which will be helping in the reduction of Udavartini

In Duration and site of pain - Panchapalaka Ghrita showed more result

- Pippali act as Shoolaprasamana and has antispasmodic action. Dadima is Hridya, Raktadustihara, and Tridoshahara and is a potent relaxant. Shunti has Shoolaprasamana and Vatanulomana properties. Dhanyaka act as Agnideepana, Vata-Kaphanulomana and its Ushna Veerya removes Avarana and allows normal Gati of Vata.
- Ksheera is Madhura, Snigda, Vata-Pitta Hara and is Jeevana, Brimhana, Balya and Rasayana. Mridhuvirechana Karma does Anulomana of Apana Vata. Ghrita is Udavartahara

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In Intensity and associated complaints - *Dhanyaka Ghrita* showed more result

- Jeeraka is Garbhahaya Shodhakara and Shoolaprashamana, which cures Raja Krichrata of Udavartini. Vatanulomana brings normal Gati of Vikrita Apanavata.
- Katu Rasa, Ushna Veerya and Katu Vipaka of Jeeraka act as Agnideepana, and Balya.
- Jeeraka is mentioned under Shoolaprasamana Gana by Charaka indicates the pain-relieving action and Sirovirechana Gana suggestive of Kapha Hara property
- It is mentioned under Pippalyadi Gana of Susrutha indicates prevention of Amotpatti and thereby preventing progression of Avarana Samprapti of Udavartini.

CONCLUSION

Now a days the gynaecological problems have increased than the earlier days, probably due to stressful & modern lifestyle, untimely & unhealthy food habits which affect the uterine environment, and not following the proper regimens as mentioned in *Ayurvedic classics*

The aim of this study was to evaluate the effect of *Panchapalaka Ghrita* and *Dhanyaka Ghrita* in *Udavartini Yoni Vyapad*. Both *Ghrita* contains *Tikta*, *Madhura* and *Katu Rasa*, *Ushna Virya*, *Madhura Vipaka* and *Vatanulomana* properties that is 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.

The formulation contains drugs, which has *Balya*, *Brimhana* and *Rasayana* properties, hence helps in maintaining good health of the body and helps in enhances the immunity.

There was statistically significant improvement in all cardinal features of *Udavartini*/Primary dysmenorrhea On comparison between the groups, both groups showed significant improvement in the management of signs and symptoms of *Udavartini Yonivyapad*.

As in both the groups of *Ghrita*, have similar properties and action, Null Hypothesis is rejected and Alternate Hypothesis H₁ - Both the *Panchapalaka Ghrita* and *Dhanyaka Ghrita* have significant effect in the management of *Udavartini Yonivyapad* is accepted.

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