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Clinical evaluation of Erand Tail Nabhi Puran in the management of Dysmenorrhea: Pilot Study

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ABSTRACT

Dysmenorrhea is defined as painful menstrual cramps of uterine origin which can be correlated with Udavartini Yonivyapad. It is very common gynecological disorder in females specially in reproductive age. Sometimes it also hampers women's daily routine. Udavarta Yonivyapad is explained in Ayurveda as a Nanatmaja Vata Vyadhi by Charaka where there is abnormal movement of Vayu in Pakwashay with painful menses. There are different types of NSAIDS, OC pills, painkillers, etc. to give temporary relief from pain but it also has side effects on body if taken in excess amount. In Ayurveda lot of formulations are used for treatment of same. An attempt has been made through Ayurveda classics in regards to dysmenorrhea with Nabhi Puran using Eranda Taila.

Key words: Dysmenorrhea, Nabhi Puran, Eranda Taila, Udavartini Yonivyapad

INTRODUCTION

Ayurveda is a science of life which focuses on preventive aspect rather than curative one. Ayurveda is an intricate and detailed science, which provides great insight into the cure of disease without causing any or minimal side effects.

Dysmenorrhea is painful menstrual cramps of uterine origin and one of the most common gynecological problems in young women, particularly among reproductive age.^[1] It is characterized by painful menstruation severe enough to prevent from doing daily activities. It is classified according to its patho-

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physiology as primary dysmenorrhea and secondary dysmenorrhea.

- 1. Primary dysmenorrhea Menstrual pain without pelvic pathology.
- 2. Secondary dysmenorrhea Painful menses associated with an underlying pathology.

Clinical features of primary dysmenorrhea

- a) Onset shortly after menarche within 6-24 months.
- b) Usual duration of 48-72 hours, often starts before or just after the menses
- c) Cramping or labor like pain, cyclic pattern, most severe during 1st day of menses and lasts till 72 hours.
- d) Often unremarkable pelvic examination findings [2,3]

Udavarta Yonivyapad is explained in Ayurveda as a Nanatmaja Vata Vyadhi by Charaka where there is abnormal movement of Vayu in Pakwashaya. Udavartini Yonivyapad is characterized by painful menstruation i.e., kashtarva.[4] According to Charaka, Rajas is pushed in upward direction by the aggravated

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Apana Vayu, it fills the Yoni, causing pain and upward movement of Rajas. This Rajas is expelled with great difficulty. [5] Once the Rajas is expelled pain is relieved.

From all formulation *Erand Tail is* chose for *Nabhi Puran* for its *Vaathar* properties. *Erand Tail Basti* is mentioned as *Chikitsa* in *Samhita* for *Yonivyapad* but *Nabhi Puran* is chosen because of its easy administration. *Nabhi Puran* with *Eranda Taila* showed significant improvement in signs and symptoms of dysmenorrhea.

AIM AND OBJECTIVES

- 1. To study in detail about *Nabhi Puran* and dysmenorrhea
- 2. To evaluate efficacy of *Erand Taila Nabhipuran* in dysmenorrhea

MATERIALS AND METHODS

Study Population

A total of 10 females with diagnosed cases of primary dysmenorrhea, were enrolled from the OPD of *Stree Roga & Prasuti Tantra*, Shree Saptashrungi Ayurveda Mahavidyalaya and Hospital, Nashik.

Study Design

This was a pilot study conducted in Department of *Stree Roga & Prasuti Tantra* at Shree Saptashrungi Ayurveda Mahavidyalaya and Hospital, Nashik.

Drug Review

Earnd Tail is used in this study for Nabhi Puran.

Eranda - Ricinus communis, Euphorbiaceae

Rasa - Madhur; Guna - Guru Singdha; Virya - Ushna; Vipaka - Madhur; Karma - Vaathar, Vrushya, Aampachan.

Inclusion Criteria

- a) Age group 20 to 35 years
- b) Dysmenorrhea without any pelvic pathology (Primary Dysmenorrhea)
- c) Regular menstrual cycle

Exclusion Criteria

- a) Secondary Dysmenorrhea
- b) Age group below 20 and above 35 years excluded
- c) Irregular menstrual cycle
- d) Patient with venereal diseases

Intervention - Nabhi Puran with Erand Taila was done

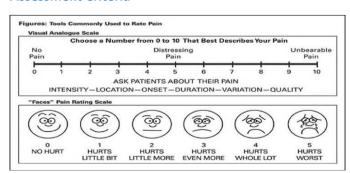
Mode of intervention

Drug	Erand Taila
Kalpana	Erand Taila Nabhipuran
Duration	7 days prior to menses till days 5 of menses
Root of Administration	External (Local) <i>Nabhipuran</i>
Matra	As per required

Mode of Action

A drug which has the property to bring about the *Anuloma Gati* of *Vata* helps in reliving the symptoms of primary dysmenorrhea. *Eranda Taila* has been mentioned in *Bhaishajya Ratnavali* 5/1290-91. The *Vata* is obstructed by *Meda, Kapha, Pitta, or Rakta*. The reduction in painful menstruation attributed to *Ushna Virya, Anulomana, Tridoshahara* and *Shothahara* properties of *Eranda*. Due to its *Srota Avarodhahara* property, it removes the *Sanga* in *Srotas* and *Dosha Shaman* especially *Vatahara* property leads to reduction in pain during menses. The oil gets absorbed in pores of skin and act on deeply located *Doshas*.

Assessment Criteria



SN **Symptoms** Criteria Grade 1. Lower Abdomen No Lower Abdomen 0 Pain (VAS) Pain (0) Mild Lower Abdomen 1 Pain (1-3) 2 Moderate Lower Abdomen Pain (4-6) 3 Sever Lower Abdomen Pain (7-10) Nausea 0 2. No Nausea 1 Mild Nausea Moderate Nausea 2 Sever Nausea 3 3. Period Fatigue No period fatigue 0 Mild period fatigue 1 2 Moderate period fatigue 3 Sever period fatigue

Age wise distribution

SN	Age Groups	No. of Patients	Percentage
1.	16 – 24 yr.	02	20.00
2.	25 – 33 yr.	07	70.00
3.	34– 42 yr.	01	10.00
Total		10	100 %

Age wise distribution of 10 patients of Primary Dysmenorrhea.

Marital status wise distribution

SN	Marital status	ital status No. of Patients	
1.	Married	04	40.00
2.	Unmarried	06	60.00

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Total	10	100 %
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Marital status wise distribution of 10 patients of Primary Dysmenorrhea.

Occupation

SN	Occupation	No. of Patients	Percentage	
1.	Worker	01	10.00	
2.	Housewife	02	20.00	
3.	Receptionist	Receptionist 01		
4.	Student	06	60.00	
Total		10	100 %	

Occupation wise distribution of 10 patients of Primary Dysmenorrhea.

Education wise distribution

SN	Education	No. of Patients	Percentage
1.	Illiterate	02	20.00
2.	Literate 08		80.00
Total		10	100 %

Education wise distribution of 10 patients of Primary Dysmenorrhea

Prakruti wise distribution

SN	Prakruti wise distribution	No. of Patients	Percentage	
1.	Vata	00	00.00	
2.	Pitta	00	00.00	
3.	Kapha	00	00.00	
4.	Vata-Pitta	03	30.00	
5.	Pitta-Kapha 02		20.00	
6.	Kapha-Vata	05	50.00	
Total		10	100 %	

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Prakruti wise distribution of 10 patients of Primary Dysmenorrhea.

Agni wise distribution

SN	Agni wise distribution	No. of Patients	Percentage	
1.	Tikshagni 01		10.00	
2.	Mandagni	06	60.00	
3.	Vishamagni	03	30.00	
4.	Samagni	00	00.00	
Total		10	100%	

Agni wise distribution of 10 patients of Primary Dysmenorrhea.

Koshta wise distribution

SN	Koshta wise distribution	No. of Patients	Percentage	
1.	Krura	06	60.00	
2.	Madhya	01	10.00	
3.	Mrudu	03	30.00	
Total		10	100 %	

Koshtha wise distribution of 10 patients of Primary Dysmenorrhea.

Statistical Analysis

Subjective Parameters by Wilcoxon Singed Rank test

Lower Abdomen Pain (VAS)

BT/AT	N	Mean	SD	w	Р	Result
ВТ	10	2.700	0.483	-	P<0.001	Significant
AT	10	0.200	0.422	55		
Difference	10	2.500	0.527			

Nausea

BT/AT	N	Mean	SD	w	Р	Result
ВТ	10	1.900	0.738	-	P<0.001	Significant
AT	10	0.300	0.483	55		
Difference	10	1.600	0.516			

Menstruation Fatigue

BT/AT	N	Mean	SD	w	Р	Result
ВТ	10	2.300	0.483	- 55	P<0.001	Significant
AT	10	0.300	0.483	55		
Difference	10	2.000	0.816			

Effect of therapy according to relief in Patients' score

SN	B.T.	A.T.	Relieved	Relief in %
1.	7	1	6	85.71429
2.	6	0	6	100
3.	7	2	5	71.42857
4.	8	0	8	100
5.	7	1	6	85.71429
6.	5	0	5	100
7.	7	1	6	85.71429
8.	8	1	7	87.5
9.	8	1	7	87.5
10.	6	1	5	83.33333

Total Effect of therapy

SN	Improvement	No of Patients	Percentage
1.	Good Improvement (75% - 40%)	10	100.00 %
2.	Moderate Improvement (50% - 75%)	00	00.00 %
3.	Mild Improvement (25% - 50%)	00	00.00 %
4.	Unchanged (No Improvement) (0% - 25%)	00	00.00 %
Total		10	100%

Effect of therapy according to relief in Symptoms' score

SN	Symptoms	В.Т.	A.T.	Relieved	% Relief
1.	Lower Abdomen Pain (VAS)	27	02	25	92.59
2.	Nausea	19	03	16	84.21
3.	Period Fatigue	23	03	20	86.95
	Overall result				87.9166

Shows effect of therapy according to relief in symptoms score

SN	Improvement	Symptoms	No. of Symptoms
1.	Good Improvement (75% - 40%)	Lower Abdomen Pain (VAS), Nausea and Period Fatigue	03
2.	Moderate Improvement (50% - 75%)		00
3.	Mild Improvement (25% - 50%)		00
4.	Unchanged (No Improvement) (0% - 25%)		00

Total effect of therapy:

SN	Class	Percentage of improvement
1.	Good improvement	Total relief in cardinal symptoms - 75- 100%
2.	Moderately improvement	50% - 75%
3.	Mild improvement	25% – 50%
4.	Poor improvement	Less than 25%

DISCUSSION

Age wise distribution

In the present study, maximum no. of patients i.e. 07 were from the age group 25-33 yrs. Followed by 02 in 16-24 yrs and 01 in 34-42 yrs.

Marital status wise distribution

In the present study, maximum no. of patients i.e. 06 was unmarried while remaining 04 was married.

Occupation

According Occupation wise distribution it was found that, maximum no. of patients i.e., 06 were students and followed by 02 were Housewife, 01 were worker and 01 were Receptionist.

Education wise Distribution

On the observation it was found that, no. of patients i.e., 08 were Illiterate while remaining 02 are literate.

Prakruti wise distribution

On the observation it was found that, maximum no. of patients i.e., 05 were in *Kaphat Vataja Sharira Prakruti*, 03 were *Vata-Pttaja Sharira Prakruti* and 02 were *Pitta-Kaphaja Sharira Prakruti*.

Agni wise distribution

On the observation it was found that, maximum no. of patients i.e., 06 were in *Mandagni* and 03 were *Vishamagni* and 01 was *Tikshagni*.

Koshta wise distribution

On the observation it was found that, maximum no. of patients i.e. 06 were in *Krura Mrudu Koshta* and 03 were *Mrudu Koshta* and 01 were *Madhya Koshta*.

Statistical Analysis

Statistical analysis between BT and AT by Wilcoxon Signed Rank Test in Subjective Parameters

SN	Symptoms	w	Р	Significance
1.	Lower Abdomen Pain (VAS)	-55	P<0.001	Significant
2.	Nausea	-55	P<0.001	Significant

3. Period Fatigue -55 P<0.001 Significant

Wilcoxon Ranked Sign test was applied observe whether the difference between BT and AT score is significant or not.

H₀: *Erand Taila Nabhipuran* is not effective to reduce symptoms in *Udavartini Yonivyapad* (Dysmenorrhea).

H₁: *Erand Taila Nabhipuran* is effective to reduce symptoms in *Udavartini Yonivyapad* (Dysmenorrhea).

In the case of all symptoms Lower Abdomen Pain (VAS), Nausea and Period Fatigue the test has shown highly significant difference between BT and AT symptom scores. **H**₁ is accepted and **H**₀ is rejected here. It was hence concluded that *Erand Taila Nabhipuran* is effective to reduce Lower Abdomen Pain (VAS), Nausea and Period Fatigue symptoms in *Udavartini Yonivyapad* (Dysmenorrhea).

Symptom	Mean	SD	w	P value
Lower Abdomen Pain (VAS)	2.500	0.527	-55	P<0.001
Nausea	1.600	0.516	-55	P<0.001
Menstruation Fatigue	2.000	0.816	-55	P<0.001

Total effect of the therapy

- The total effect of therapy is evaluated by taking relief in percentage of each patient. Out of 10 patients Good improvement was seen in 10 patients.
- 2. By using *Erand Taila Nabhipuran* on *Udavartini Yonivyapad* (Dysmenorrhea) symptoms as Lower Abdomen Pain (VAS), Nausea and Period Fatigue were got the 75 % to 100 % relief.
- 3. As for Lower Abdomen Pain (VAS) symptom in Study group shown the 92.59 % relief followed by 84.21 % for Nausea and 86.95 % for Period Fatigue for symptom of all 10 patients of *Udavartini Yonivyapad* (Dysmenorrhea).
- 4. *Udavartini Yonivyapad* is *Vaat Vyadhi* and can be treated rightly with help of *Vaathar* drugs. *Nabhi* is *Sthan* of *Apan Vayu*. In *Udavartini Yonivyapad*, it is

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- Apan Vayu that is vitiated causing pain during menses. Erand Tail causing Shaman of Apan Vayu with its Vaathar Properties followed by pain relief.
- 5. It was also observed the menses were smooth without any discomfort and approximately occurred on Day 28 of the cycle. *Eranda Taila* contain constituents like tannin, saponin etc. The role of tanin and saponin in analgesic and anti-inflammatory activities were proven. [6] *Rukshahara, Shophahara, Apanavatanulomana* and *Deepen* properties of *Eranda Taila* can be considered for reducing pain. [7]

CONCLUSION

Nabhi Puran with Eranda Taila showed significant improvement in signs and symptoms Dysmenorrhea. Dysmenorrhea which can be treated by using principles of Vatiki Yoniroga Chikitsa. Vatika Yoniroga Chikitsa includes Snehan, Swedan, Basti along with Shaman Aushadhi which can alleviate Vata and gives relief from pain. The total effect of therapy is evaluated by taking relief in percentage of each patient. Out of 10 patients Good improvement was seen in 10 patients. By using Erand Taila Nabhipuran on Udavartini Yonivyapad (Dysmenorrhea) symptoms as Lower Abdomen Pain (VAS), Nausea and Period Fatigue were got the 75 % to 100 % relief. As for Lower Abdomen Pain (VAS) symptom in Study group shown the 92.59 % relief followed by 84.21 % for Nausea and 86.95 % for Period Fatigue for symptom of all 10 patients of Udavartini Yonivyapad (Dysmenorrhea). Nabhi Puran is a cost effective, safe and effective procedure in any pain during menses. Based on the outcome of the study we can adopt Nabhi Puran in the management of Primary Dysmenorrhea. The present study was conducted with limited time, limited facilities and limited number of patients. A study of larger group of patients may help to comprehend the mode of action of the trial drug.

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