Research Article

EFFICACY OF *MATRABASTI* ON *KASHTARTAVA* (PRIMARY DYSMENORRHOEA)

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ABSTRACT

In today's lifestyle woman's status is expected to reach new horizons both socially and physically but some of the physiological things trouble the lady to make her slow down the race, by disturbing the normal menstruation, which is the function of *Apana vayu*. One of such problem is '*Kashtartava*' (Dysmenorrhoea) i.e. painful menstruation.

In *Ayurvedic* texts, though various conditions are described in which menstruation occurs with pain but *Kashtartava* is not mentioned specifically. It is a symptom of various *Yonivyapadas* specially *Udavarta*, *Vatala*, *Sannipatika* etc. The genital tract of women does not get affected without *Vata*, Hence one should pacify it first and then treat the other *Doshas*. For *Vata dosha basti chikitsa* is very important.

Matrabasti is used by someone who emaciated by overwork or too much exercise, too much heavy lifting, walking too long of a distance, too much sexual activity or someone with *Vata* disorders. One of the effects of *Matrabasti* is "*Vatarognut*", Hence *Matrabasti* may be effective on *Kashtartava* (Dysmenorrhoea).

From above study, it can be concluded that due to *Basti chikitsa* vitiated *Vata dosha* gets mitigated and hence all the symptoms diminish and it has been observed that *Til taila Matra Basti* is very effective in subjects of *Kashtartava* (Primary Dysmenorrhoea).

KEYWORDS: *Kashtartava*, Menstruation, Dysmenorrhoea, *Matrabasti*.

INTRODUCTION

The *Tridosha* i.e. *Vata*, *Pitta* and *Kapha* regulates every physiological and psychological process in the living organisms[1]. Harmonious state of the three *Doshas* creates balance and health; an imbalance, which might be an excess (*Vriddhi*) or deficiency (*Kshaya*), manifests as a sign or symptom of disease.

Apana is one of the five types of *Vata Dosha*. It is located in the *Apana*, moves in *Shroni*, *Basti*, *Medhra* and *Uru*. It attends to the functions such as *Nishkramana* of *Shukra*, *Artava*, *Shakrut*, *Mutra* and *Garbha*. One of the functions of *Apana vata* that is *Artava nishkraman karma*[2]. In this study word *Artava* is used for "menstrual Blood" (i.e. *Rajstrava*).

In today's lifestyle woman's status is expected to reach new horizons both socially and physically but some of the physiological things trouble the lady to make her slow down the race, by disturbing the normal menstruation, which is the function of *Apana vayu*. One of such problem is '*Kashtartava*' (Dysmenorrhoea) i.e. painful menstruation.

In *Ayurvedic* texts, though various conditions are described in which menstruation occurs with pain but *Kashtartava* is not mentioned specifically. It is a symptom of various *Yonivyapadas* specially *Udavarta, Vatala, Sannipatika* etc. The genital tract of women does not get affected without *vata*, Hence one should pacify it first and then treat the other *Doshas*[5].

As in all cases of *Kashtartava*, *Vataprakopa* is the main cause; the treatment should be directed to treat the *Vata dosha* and eradication of the cause. This is the main principle of treatment of *Kashtartava*.

Matrabasti is one of the types of *Basti*. It can be administered to any individual, at any time. It doesn't cause any *Vyapada.* It is administered in a smallest quantity (i.e. *Hraswa matra* of *snehapana*) without any *Pathya aahar* and *Vihara.*[6]

Therefore this study was effort to approach the effect of *Matrabasti* in the subjects suffering from *Kashtartava*.

AIMS AND OBJECTIVES

To study *Kashtartava* (Primary Dysmenorrhoea) from *Ayurveda* and Modern point of view.

MATERIALS AND METHODS

Conceptual study: Detailed study of *Kashtartava* (Primary Dysmenorrhoea) along with the review of drugs chosen for *Matra Basti* from all available books and internet was carried out.

Clinical Study: Patients attending the OPD and IPD of the Y.M. T. Ayurvedic College and Hospital, Kharghar, Navi Mumbai, were enrolled for the study.

Number of Patients

Total number of patients included in this study was 30.

Inclusion criteria

- Subjects with chief complain of *Kashtartava* (Primary Dysmenorrhoea) with scanty or average amount of menstrual fluid.
- Age group between 15-25 yrs
- Subjects suffering for more than 2 cycles
- Regular menses

Exclusion Criteria

- Subjects below the age of 15 years and above the age of 25 years
- Subjects with chronic general illness
- Subjects with Intrauterine contraceptive devices
- Menorrhagia
- Any uterine pathology
  - o Fibroid
  - o Adenomyosis
  - o Endometriosis
- Irregular menses

Consent

An informed written consent was taken from all the subjects included in this study. In subjects below the age of 18 yrs consent was taken by their guardians.

Methodology

Plan of study

- 30 subjects were included in the study according to inclusion criteria.
- Each subject was examined thoroughly according to Case Record Form (CRF).

Laboratory Investigations

a) Haematological 1) Hb – To know the severity

2) W.B.C – To rule out infection

3) ESR – Rate of infection

b) Sonography (Pelvis) (for uterine and adenexal study, if needed to rule out any pathology or lesion.)

Drug administration details

Subjects were treated with *Til Taila Matrabasti* which contains: *Til Taila (Koshna)* (60 ml), *Saindhav* (1 gm) and *Shatpushpa churna* (2 gms).

Poorva Karma: *Sthanik Abhyang* and *Sthanik Svedana* over *Kati, Prushta* and *Nitamba region*

Pradhan karma: *Til Taila Matrabasti* was administered slowly through the rectum in left lateral position.

Pashchat Karma: *Sphik Savahan*, Subjects were allowed to sleep in supin position for 10 min, *Bastidharan kala* of subjects were noted in Case Record Form (CRF) on next day.

Duration of the Treatment - 9 days prior to the expected date of each menstrual cycle for 2 consecutive menstrual cycles.

Follow up: After every cycle of *Matrabasti* and one month after Completion of treatment follow ups of the subjects were taken, Symptom wise clinical readings were noted.

Bastidravya[7]

- *Koshna Til taila* (sesame oil)
- *Shatpushpa Churna*
- *Saindhav* (Rock salt)

Criteria of Assessment

The efficacy of the therapy is assessed on the basis of objective criteria. Most of the symptom like pain and associated symptoms regarding *Kashtartava* are subjective in nature. Hence scoring system is adapted for statistical analysis and to give results on objective parameters. Score was given according to absence of symptoms (Normal), mild, moderate and severe symptoms as follows.

Assessment of Effect of Therapy

The effect of the therapy was assessed in terms of cured, markedly improved, improved, and unchanged and LAMA.

Following symptoms were assessed- Pain (Primary Dysmenorrhoea) - Severity of pain (Multidimensional scoring pattern), Duration of pain; *Artava Pramana* (Assessment by number of pads used), *Rajstrav Avadhi* (Duration of menses), Nausea, Vomiting, Diarrhoea, Constipation, Faints and Giddiness.

The details are as follows

1. **Cured:** Total relief in symptoms will be considered as "Cured".
2. **Markedly Improved:** 50% or more average improvement in signs and symptoms will be termed as "Markedly improved".
3. **Improved:** Improvement ranging in between 25% to 50% responded by the subjects in signs and symptoms will be taken for "Improved".
4. **Unchanged:** Those subjects presenting less than 25% improvement in their signs and symptoms will be categorized as "Unchanged".
5. **LAMA:** Those subjects who left the therapy before advised duration or who did not follow the

instructions will be considered as Left against Medical Advice (LAMA).

Statistical Analysis

All data generated and collected during the study was subjected to statistical analysis to reach to final results and conclusions.

Statistical parameters like Paired t test, Graphical representations and statistical methods were applied to the data generated wherever possible, to find out the significance of improvement. Objective parameters (Quantitative data) parametric test are applied.

Table 1: Showing Statistical Analysis

Symptoms	P value	Significance
Severity of pain	<0.0001	Significant
Duration of pain	<0.0001	Significant
Artava Pramana	0.0117	Significant
Rajstrava avadhi	0.0117	Significant
Nausea	<0.0001	Significant
Vomiting	0.0002	Significant
Diarrhoea	0.0117	Significant
Constipation	0.0008	Significant
Faint	0.0059	Significant
Giddiness	0.0014	Significant

Effect of *Matra Basti*

Table 2: Severity of Pain Wise Distribution

Subject with Severity of Pain wise Symptom								Subject without Severity of Pain wise Symptom	
BT		AT							
		Present		Improved		Absent			
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
30	100	0	0	23	76.66	7	23.33	0	0

Out of 30 Subjects included in the trial, 30 subjects (100.00%) had symptom of severity of pain and none of the subject was without symptom. After *Matrabasti*, 23 subjects (76.66%) had improvement in severity of pain and 7 subjects (23.33) cured i.e. absent.

Table 3: Duration of Pain Wise Distribution

Subject with Duration of Pain wise Symptom								Subject without Duration of Pain wise Symptom	
BT		AT							
		Present		Improved		Absent			
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
30	100	1	3.33	22	73.33	7	23.33	0	0

Out of 30 Subjects included in the trial, 30 subjects (100.00%) had symptom in Duration of Pain and none of the subject was without symptom. After *Matrabasti*, 22 subjects (73.33%) had improvement in Duration of pain and in 7 subjects (23.33%) it is cured i.e. absent and in 1 subject (3.33%) it was present.

Table 4: *Artava Pramana* Wise Distribution

Subject with *Artava Pramana* wise Symptom								Subject without *Artava Pramana* wise Symptom	
BT		AT							
		Present		Improved		Absent			
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
13	43.33	7	23.33	5	16.66	1	3.33	17	56.66

Out of 30 Subjects included in the trial, 13 subjects (43.33%) had symptom *Artava Pramana* and 17 subjects (56.66%) were without symptom. After *Matrabasti*, 5 subjects (16.66%) had improvement in *Artava Pramana* and in 1 subject (3.33%) it is cured i.e. absent and in 7 subjects (23.33%) it was present.

Table 5: *Rajastrava Avadhi* Wise Distribution

Subject with *Rajastrava Avadhi* wise Symptom								Subject without *Rajastrava Avadhi* wise Symptom	
BT		AT							
		Present		Improved		Absent			
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
13	43.33	7	23.33	5	16.66	1	3.33	17	56.66

Out of 30 Subjects included in the trial, 13 subjects (43.33%) had symptom *Rajstrava Avadhi* and 17 subjects (56.66) were without symptom. After *Matrabasti*, 5 subjects (16.66%) had improvement in *Rajstrava Avadhi* and in 1 subject (3.33%) it is cured i.e. absent and in 7 subjects (23.33%) it was present.

Table 6: Nausea Wise Distribution

Subject with Nausea wise Symptom							Subject without Nausea wise Symptom	
BT		AT						
		Present		Improved		Absent		
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
17	56.66	0	0	2	6.66	15	50.00	13	43.33

Out of 30 Subjects included in the trial, 17 subjects (56.66%) had symptom Nausea and 13 subjects (43.33%) were without symptom. After *Matrabasti*, 2 subjects (6.66%) had improvement in Nausea and in 15 subjects (50.00%) it is cured i.e. absent and in none of the subject it was present.

Table 7: Vomiting Wise Distribution

Subject with Vomiting wise Symptom							Subject without Vomiting wise Symptom	
		AT						
BT		Present		Improved		Absent		
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
13	43.33	0	0	1	3.33	12	40.00	17	56.66

Out of 30 Subjects included in the trial, 13 subjects (43.33%) had symptom Vomiting and 17 subjects (56.66) were without symptom. After *Matrabasti*, 1 subject (3.33%) had improvement in Vomiting and in 12 subjects (40.00%) it is cured i.e. absent and in none of subject it was present.

Table 8: Diarrhoea Wise Distribution

Subject with Diarrhoea wise Symptom							Subject without Diarrhoea wise Symptom	
		AT						
BT		Present		Improved		Absent		
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
6	20.00	0	0	0	0	6	20.00	24	80.00

Out of 30 Subjects included in the trial, 6 subjects (20.00%) had symptom Diarrhoea and 24 subjects (80.00%) were without symptom. After *Matrabasti*, none of the subject had improvement in Diarrhoea and in 6 subjects (20.00%) it is cured i.e. absent and in none of subject it was present.

Table 9: Constipation Wise Distribution

Subject with Constipation wise Symptom							Subject without Constipation wise Symptom	
		AT						
BT		Present		Improved		Absent		
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
6	20.00	0	0	0	0	6	20.00	24	80.00

Out of 30 Subjects included in the trial, 6 subjects (20.00%) had symptom Constipation and 24 subjects (80.00%) were without symptom. After *Matrabasti*, none of the subject had improvement in Constipation and in 6 subjects (20.00%) it is cured i.e. absent and in none of subject it was present.

Table 10: Faint Wise Distribution

Subject with Faint wise Symptom							Subject without Faint wise Symptom	
		AT						
BT		Present		Improved		Absent		
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
7	23.33	0	0	0	0	7	23.33	23	76.66

Out of 30 Subjects included in the trial, 7 subjects (23.33%) had symptom Faint and 23 subjects (76.66%) were without symptom. After *Matrabasti*, none of the subject had improvement in Faint and in 7 subjects (23.33%) it is cured i.e. absent and in none of subject it was present.

Table 11: Giddiness Wise Distribution

Subject with Giddiness wise Symptom								Subject without Giddiness wise Symptom	
BT		AT							
		Present		Improved		Absent			
No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%	No. of subject	%
9	30.00	0	0	0	0	9	30.00	21	70.00

Out of 30 Subjects included in the trial, 9 subjects (30.00%) had symptom Giddiness and 21 subjects (70.00%) were without symptom. After *Matrabasti*, none of the subject had improvement in Giddiness and in 9 subjects (30.00%) it is cured i.e. absent and in none of subject it was present.

Table 12: Showing Percentage of Relief

Sr. No.	Reg. No.	Total Symptom Score		Total Relief Score	Relief %
		BT	AT		
1	57502	12	8	4	33.33
2	56751	5	2	3	60
3	50523	11	6	5	45.45
4	49809	12	6	6	50
5	49544	6	2	4	66.66
6	52177	13	4	9	69.23
7	50043	8	2	6	75
8	52968	11	2	9	81.81
9	60003	12	2	10	83.33
10	60475	6	2	4	66.66
11	56231	11	2	9	81.81
12	59802	13	6	7	53.84
13	63337	7	2	5	71.42
14	62176	11	2	9	81.81
15	62170	9	2	7	77.77
16	62175	9	2	7	77.77
17	62338	14	4	10	71.42
18	59376	4	0	4	100
19	58482	10	2	8	80
20	59748	5	3	2	40
21	64611	10	5	5	50
22	70196	7	2	5	71.42
23	73197	10	4	6	60
24	73183	8	4	4	50
25	73254	9	3	6	66.66
26	73247	12	6	6	50
27	73262	7	2	5	71.42
28	73277	8	3	5	62.5
29	73538	11	5	6	54.54
30	73525	4	0	4	100

Clinical efficacy of the therapy under study
Table showing statistical analysis

Table 13: Showing Statistical analysis on Severity of pain

Severity of Pain	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	2.400					
1st cycle	1.400	1.000	0.371	0.067	14.75	<0.0001
2nd cycle	1.067	1.333	0.547	0.099	13.36	<0.0001
3rd cycle	1.000	1.400	0.563	0.102	13.61	<0.0001

The table shows the statistical analysis for Severity of Pain where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Pain of *Kashtartava* (Primary Dysmenorrhoea) subjects is effective.

Table 14: Showing Statistical analysis on Duration of Pain

Duration of Pain	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	2.333					
1st cycle	1.567	0.767	0.679	0.124	6.185	<0.0001
2nd cycle	1.033	1.300	0.651	0.118	10.93	<0.0001
3rd cycle	1.000	1.333	0.660	0.120	11.05	<0.0001

The table shows the statistical analysis for Duration of Pain where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Duration of Pain in *Kashtartava* subjects is effective.

Table 15: Showing Statistical analysis on *Artava Pramana*

Artava Pramana	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.600					
1st cycle	0.500	0.100	0.305	0.055	1.795	0.0831
2nd cycle	0.400	0.200	0.407	0.074	2.693	0.0117
3rd cycle	0.400	0.200	0.407	0.074	2.693	0.0117

The table shows the statistical analysis for *Artava Pramana* where t-score shows the difference is significant at 2nd and 3rd follow ups. It means that the said therapy used for *Artava Pramana* in *Kashtartava* subjects is effective.

Table 16: Showing Statistical analysis on *Rajastrava Avadhi*

Rajstrava Avadhi	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.600					
1st cycle	0.500	0.100	0.305	0.055	1.795	0.0831
2nd cycle	0.400	0.200	0.407	0.074	2.693	0.0117
3rd cycle	0.400	0.200	0.407	0.074	2.693	0.0117

The table shows the statistical analysis for *Rajastrava Avadhi* where t-score shows the difference is significant at 2nd and 3rd follow ups. It means that the said therapy used for *Rajastrava Avadhi* in *Kashtartava* subjects is effective.

Table 17: Showing Statistical analysis on Nausea

Nausea	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.900					
1st cycle	0.267	0.633	0.615	0.112	5.641	<0.0001
2nd cycle	0.100	0.800	0.805	0.147	5.442	<0.0001
3rd cycle	0.067	0.833	0.834	0.152	5.473	<0.0001

The table shows the statistical analysis for Nausea where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Nausea in *Kashtartava* subject is effective.

Table 18: Showing Statistical analysis on Vomiting

Vomiting	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.633					
1st cycle	0.200	0.433	0.504	0.092	4.709	<0.0001
2nd cycle	0.067	0.567	0.728	0.132	4.264	0.0002
3rd cycle	0.033	0.600	0.770	0.140	4.267	0.0002

The table shows the statistical analysis for Vomiting where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Vomiting in *Kashtartava* subjects is effective.

Table 19: Showing Statistical analysis on Diarrhoea

Diarrhoea	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.400					
1st cycle	0.100	0.300	0.651	0.118	2.523	0.0174
2nd cycle	0.000	0.400	0.814	0.148	2.693	0.0117
3rd cycle	0.000	0.400	0.814	0.148	2.693	0.0117

The table shows the statistical analysis for Diarrhoea where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Diarrhoea in *Kashtartava* subjects is effective.

Table 20: Showing Statistical analysis on Constipation

Constipation	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.767					
1st cycle	0.367	0.400	0.621	0.113	3.525	0.0014
2nd cycle	0.200	0.567	0.774	0.141	4.011	0.0004
3rd cycle	0.267	0.500	0.731	0.133	3.746	0.0008

The table shows the statistical analysis for Constipation where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Constipation in *Kashtartava* subjects is effective.

Table 21: Showing Statistical analysis on Faint

Faint	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.233					
1st cycle	0.000	0.233	0.430	0.078	2.971	0.0059
2nd cycle	0.000	0.233	0.430	0.078	2.971	0.0059
3rd cycle	0.000	0.233	0.430	0.078	2.971	0.0059

The table shows the statistical analysis for Faint where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Faint in *Kashtartava* subjects is effective.

Table 22: Showing Statistical analysis on Giddiness

Giddiness	Mean	Mean Difference	SD	SEM	Paired t value	P value
Initial	0.300					
1st cycle	0.000	0.300	0.466	0.085	3.525	0.0014
2nd cycle	0.000	0.300	0.466	0.085	3.525	0.0014
3rd cycle	0.000	0.300	0.466	0.085	3.525	0.0014

The table shows the statistical analysis for Giddiness where t-score shows the difference is significant at every follow ups. It means that the said therapy used for Giddiness in *Kashtartava* (Primary Dysmenorrhoea) subject is effective.

DISCUSSION

The observations noted in 30 subjects and displayed in tables, graphs and supplementary notes are critically discussed hereafter.

It is observed that there was significant improvement in symptoms like Severity pain, Duration of pain and associated symptoms like *Artava pramana*, *Rajstrav Avadhi*, Nausea, Vomiting, Constipation, Diarrhoea, Faint and Giddiness.

While treating any disease the *Mula sthana* of vitiated *Dosha* has to be treated first. According to *Acharya Vagbhata*, *Guda* is *mula sthana* of *Apana vayu* and *Shroni, Basti, Medhra, Uru* are the *Sanchari sthana* of *Apana vata*. *Basti* is said to be *Pradhan chikitsa* of *Vata dosha*. Therefore it can be concluded that due to *Basti chikitsa* vitiated *Vata dosha* gets mitigated and hence all the symptoms diminish. From the above study it has been observed that *Til taila Matra Basti* is very effective in subjects of *Kashtartava*.

In this study, *Basti* is given only for 9 days for two cycles. Majority of subjects had history of *Kashtartava* for more than 3 years. If this *Basti* is given for a longer duration along with other medications results would be more significant.

CONCLUSION

Out of 30 subjects of *Kashtartava* in whom *Matrabasti* was administered, 2 subjects showed total relief in all symptoms (Cured), 21 subjects showed 50% or more average improvement in all symptoms (Markedly improved), 7 subjects showed improvement ranging in between 25% to 50% (Improved) and none of the subject remain unchanged i.e. those subjects presenting less than 25% improvement.

No adverse effects of *Matrabasti* were observed in the clinical study. Therefore it can be concluded that due to *Basti chikitsa* vitiated *Vata dosha* gets mitigated and hence all the symptoms diminish. From the above study it has been observed that *Til taila Matra Basti* is very effective in subjects of *Kashtartava.*

In future, further clinical studies are needed to be performed on a large sample size to backup the above findings. It was an effort to explore the treatise of Ayurveda to find an effective and easily approachable solution on the crisis. The treatise of Ayurveda has been partially explored in the form of *Matrabasti* on *Kashtartava.*

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