"A CLINICAL STUDY OF "*RAJAH-PRAVARTANI-VATI*" ON *KASHTARTAVA* W.S.R TO PRIMARY DYSMENORRHOEA"

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ABSTRACT:

The basic contributor of any disease manifestation in *Ayurveda* is *Tridosha. Vata* is the main *dosha* which is responsible for almost all gynaecological disorders. Among them one of the commonest complaints is *Kashtartava*. Dysmenorrhoea is defined as painful menstruation so as to incapacitate day to day activities. A systematic review of studies in developing countries performed by Harlow and Campbell has revealed that about 25-50% of adult women and about 75% of adolescents experience pain during menstruation. It is a clinical trial with 15 patients fulfilling the inclusion criteria were selected for the trial.The duration of treatment was from 7thday due date of menstrual cycle to next menstrual cycle for 60 days. The assessment was done after each cycle on 5th day of cycle & follow-up for the next menstrual cycle. The test of significance showed that the efficacy of *Rajahpravartini vati* is significant in *Kashtartava.*

Keywords: *Kashtartava*, Primary dysmenorrhoea, *Rajahpravartini Vati.*

INTRODUCTION:

Dysmenorrhoea is the most common gynaecological problem faced by women during their adolescence which causes significant discomfort & anxiety for the woman as well as family. Dysmenorrhoea itself is not life threatening, but is found to have a profound impact on the daily activities and may result in missing work or school, inability to participate in sports or other activities. Thereby, it may accentuate the emotional distress brought on by the pain[1].

Not less than 50% of women are said to experience some discomfort in relation to menstruation, and 5-10% of girls in their late teens and early twenties are incapacitated for several hours each month. Estimates vary widely because of difference in the criteria of dysmenorrhoea and because most investigations concern only one section of the community. The incidence of dysmenorrhoea is affected by social status, occupation and age, so groups of school girls, college students, factory workers, and women members of armed forces each provide different statistics.[2]

In *Ayurveda* dysmenorrhoea is not described as a separate disease entity. It can be because women were not suffering much from this problem those days because of pin pointed *Ritucharya & Rajasvalacharya*. Though word *Kashtartava* is not separately described as a disease in *Ayurvedic* classics there are many other diseases in which *Kashtartava* is considered and is described as a symptom. Hence,

this study is particular about the description regarding *Kashtartava* on the basis of scattered classical references.[3]

AIMS & OBJECTIVES:

- To study aetiopathogenesis of *Kashtartava* and to explore the clinical consequences.
- To evaluate the effect of the *Rajah Pravartini vati in* dysmenorrhoea.

MATERIAL AND METHODS:

Design of the Study: The method adopted in present study is Randomized, Clinical, Open study.

Selection of Cases: Total 15 clinically diagnosed and confirmed cases of Primary Dysmenorrhoea were registered from the O.P.D. / I.P.D. N.I.A. Hospital, Jaipur.

Inclusion Criteria: Participants coming with chief complaint *of Kashtartava* with scanty or average amount of menses, Participants in age group of 14 to 30 years, Participants suffering with *Kashtartava* for more than 2 consecutive cycles.

Exclusion Criteria: Participants suffering from secondary dysmenorrhoea, STIs, systemic diseases, Participants having organic pathology of uterus and adnexa e.g. Fibroid uterus, carcinoma of endometrium etc, Participants having Dysfunctional Uterine Bleeding, Participants with H/O Thyroid dysfunction.

Investigations: Laboratory investigations were carried out before treatment to rule out any other pathological conditions:

Haematological: CBC, HIV, HbsAg, VDRL, Random blood sugar, Monteux test (if needed), Thyroid profile (if needed).

Urine: Routine and microscopic examination.

Sonography (U.S.G.): For uterine and adnexal study (if needed) to rule out any pathology or lesion.

Posology:

DRUG	*Rajah-Pravartini-Vati*
DOSE	500mg twice a day with lukewarm water
ROUTE	Oral
DURATION	For two consecutive menstrual cycle/60 days

Duration for clinical trial:

The trial will be carried out for 60days in two consecutive menstrual cycles.

Follow up study:

Case will be followed during trial fortnightly for 2 consecutive menstrual cycles. Clinical assessment will be done after completion of third consecutive menstrual cycles.

Criteria of assessment:

Assessment of Pain (Dysmenorrhoea): A special **Scoring Pattern** was applied in symptoms:

1. PAIN INTENSITY:	Grade
Absent	0
Mild (pain do not interfere with daily activity)	1
Moderate (daily activity hampers, relieves with analgesics)	2
Severe (do not relieved by analgesics)	3

2. DURATION:	Grade
Absent	0
Pain for one day (for few hours)	1
Pain for one day(for whole day)	2
Pain for>or=2 days	3

3.NATURE OF PAIN	Grade
Absent	0
Occasional	1
Dull	2
Spasmodic	3

4.MENSTRUAL FLOW DURATION	Grade
1 day	0
< or =2 days	1
3-4 days	2
> or =5 days	3

5.MENSTRUAL FLOW AMOUNT	Grade
Scanty(spotting)	0

Average(1-2 pads)	1
Normal(3-4 pads)	2
Excessive(5 pads or more)	3

6. VISUAL ANALOG SCALE[3]—

1 2 3 4 5 6 7 8 9 10

Worst pain

Imaginable And further it is assessed as follows-

7 - 10	severe pain	Grade 0
6 - 4	moderate pain	Grade 1
1 - 3	mild pain	Grade 2
0	no pain	Grade 3

7. Associated complaints— total 10 complaints

7 -10	grade 0
4 - 6	grade 1
1 - 3	grade 2
0	grade 3

Rating scale for the assessment of improvement in the symptoms after therapy -

Percentage of Relief Effect:

No relief	0%	relief in the signs and symtoms
Mild relief	(1 to ≤ 25%)	relief in the signs and symtoms
Moderate Relief	(>25 to ≤ 50%)	relief in the signs and symtoms
Significant relief	(>50 to ≤ 75%)	relief in the signs and symtoms
Excellent Relief	(>75%)	relief in the signs and symtoms

Statistical Evaluation of results:

Further the effect of the treatment of signs and symptoms were analyzed statistically by Mean, SD, and SE, ‘paired Wilcoxon signed rank test ’and‘ unpaired Mann-Whitney test for non-parametric study.

OBSERVATIONS AND RESULTS:

Table No.1: Shows the pattern of clinical recovery in various **'Subjective Parameters'** of *Kashtartava* in 15 patients treated *with* **"*Rajah Pravartini Vati*" orally – by Wilcoxon matched-pairs signed-ranks test.**

S No	Symptoms	Mean		Dif.	% of Change	SD	SE	P	Results
		BT	AT						
1.	Pain Intensity	2.467	1.333	1.133	53.91%	0.7432	0.1919	<0.0001	H.S.
2.	Pain Duration	2.467	1.133	1.333	54.03%	0.7237	0.1869	< 0.0001	H.S.
3.	Nature of Pain	2.333	0.933 33	1.400	60.00%	0.6325	0.1633	<0.0001	H.S.
4.	Associated Symptoms	2.000	0.600 0	1.400	70%	0.7368	0.1902	<0.0001	H.S.
5.	VAS Scale	2.467	0.933 3	1.533	62.14%	0.6399	0.1652	< 0.0001	H.S.
6.	Flow Duration	1.733	2.133	-0.400	-23.08%	0.6325	0.1633	>0.05	N.S.
7.	Flow Amount	1.533	1.929	-0.4286	-26.66%	0.7559	0.2020	>0.05	N.S.

- Highly significant results are shown on Pain Intensity, Pain Duration, Nature of Pain, Associated symptoms and VAS Scale. Results on Flow Duration and Flow Amount were Non -significant.

Table No 2: Shows the pattern of clinical recovery in various **'Associated Symptoms'** of *Kashtartava* in 15 patients treated *with* **"*Rajah Pravartini Vati*" orally – by Wilcoxon matched-pairs signed-ranks test.**

S. No	Symptoms	Mean		Dif.	% of Relief	SD	SE	P	Results
		BT	AT						
1.	Nausea	0.66	0.13	0.53	79.99%	0.51	0.13	< 0.001	H.S.
2.	Vomiting	0.53	0.26	0.26	50.00%	0.45	0.11	> 0.05	N.S
3.	Fatigue	0.93	0.20	0.73	78.57%	0.45	0.11	< 0.001	H.S.
4.	Headache	0.46	0.06	0.40	85.7%	0.50	0.13	< 0.05	S.
5.	Fainting	0.20	0.06	0.13	66.65%	0.35	0.09	> 0.05	N.S.
6.	Sweat	0.66	0.13	0.53	79.99%	0.51	0.13	< 0.001	H.S.
7.	Diarrhoea	0.13	0.06	0.06	50.01%	0.25	0.06	> 0.05	N.S.
8.	Constipation	0.53	0.26	0.26	50.00%	0.45	0.11	> 0.05	N.S.
9.	Vaginal Discharge	0.33	0.20	0.13	39.99%	0.35	0.09	> 0.05	N.S.
10.	Breast	0.66	0.20	0.46	70.00%	0.51	0.13	< 0.05	S.

	Tenderness								
11.	Giddiness	0.80	0.40	0.40	50.00%	0.50	0.13	< 0.05	S.

- Highly significant results are shown on Nausea, Fatigue and Sweat. Significant results obtained on Headache, Breast tenderness and Giddiness. Results on Fainting, Vomiting, Diarrhoea, Constipation and Vaginal discharge were Non-significant.

Table No 3: Shows the % improvement of symptoms :

S.NO.	CARDINAL SYMPTOMS	% of relief
1	**Nausea**	79.99%
2	**Vomiting**	50.00%
3	**Fatigue**	78.57%
4	**Headache**	85.7%
5	**Fainting**	66.65%
6	**Sweat**	79.99%
7	**Diarrhoea**	50.01%
8	**Constipation**	50.00%
9	**Vaginal Discharge**	39.99%
10	**Breast Tenderness**	70.00%
11	**Giddiness**	50.00%
12	**Pain Intensity**	53.91%
13	**Pain Duration**	54.03%
14	**Nature of Pain**	60.00%
15	**Flow Duration**	23.08%
16	**Flow Amount**	26.66%
17	**Associated Symptoms**	70%
18	**VAS Scale**	62.14%
	Average % of relief	**52.84**%

Average Percentage of relief:

The symptomatic improvement was found that Average percentage of relief was **52.84%**. **It shows that effect of therapy was moderately significant.**

TABLE NO. 4: OVERALL EFFECT OF THERAPY:

S.No.	Effect of therapy	Result		
			No.	%
1	Mild	(0 to 25%)	00	0.00%
2	Moderate	(>25 to 50%)	11	73.33%
3	Significant	(>50 to 75%)	04	26.66%
4	Excellent	(>75%)	00	0.00%

DISCUSSION:

Mode of action of *Rajah Pravirtini Vati:* [4]

It is effective in *Artavavikara*. *Hingu, Kumari, Tankan and Kasis* are the main ingredients of *Rajah Pravirtini Vati*. *Hingu (Ferula Asafoetida Linn)* has *Shoolahara* (colic pain reliever) and *Vatanulomana* (facilitator of downward movement of *Vata*) property which helps in normalising the function of *Apanvata*, which is main causative factor of *Kashtartava. Hingu* has anti flatulent and digestive properties & counteracts spasmodic disorders and may probably supress the secretion of progesterone hormone[5].The gum resin contains the coumarins, 5-hydroxy-umbelliprenin, assafoetidinetc[6].

Kumari (*Aloebarbadensis* Mill.) has a characteristic bitter taste and used mainly as purgative, improves digestion; the cathartic properties of aloes are attributed to the presence of a mixture of glycosides called 'aloin'[7]. *Kumari* also contains beeta-sitosterol and has the anti-prostaglandin activity[8]. Cathartic property of this relives the obstruction in the pathways of *Vayu*, and there by relieves spasm.

Hingu, Tankana, Kasis are *Artavajanana* drugs. *Kasis* helps in *Rakta Dhatu Vriddhi*, which improve the uterine blood circulation (reduced blood circulation is a cause for dysmenorrhoea.) *Balya*(strength promoting) *(Kumari, Hingu, Tankana, Kasis) Rasayana (Kumari*) drugs give strength to uterine musculature for easy expulsion of *Raja*. *Tankana* is *Garbhashaya sankochaka*(improves the tonicity of uterine muscle) drug helps in normal harmonization during contraction.

Highly significant results are shown on Pain Intensity, Pain Duration, Nature of Pain, Associated symptoms, VAS Scale. Significant results obtained on Flow Amount. Results on Flow Duration were insignificant. Highly significant results are shown on Nausea and Sweat. Significant results obtained on Vomiting, Fatigue, Headache, Constipation, Vaginal discharge and Breast tenderness while Results on Fainting and Diarrhoea were insignificant.

It is may be due to the fact that "*Rajah Pravirtini Vati"* has *Katu(pungent)-Tikta(bitter) Rasa, Laghu(light), Snighdha(unctuous) and Tikshna(sharp) Guna, Katu Vipaka and Ushna Virya (active*

potency). Tikta (bitter) taste and *Tikshna(sharp)* property of drug removes *the Srotoavarodha* and facilitates flow of *Vata*; *KatuVipaka* and *Ushna Virya* pacifies the aggravated *Vata* and thus allows the painless flow of *Artava*.

CONCLUSION:

Therapeutic Effect of **"*Rajah-Pravartini-Vati*" orally** showed relief by improvement in 53.91% in pain intensity, 54.03% in pain duration, 60.00% in nature of pain, -23.08% in menstrual flow duration, -26.66% in menstrual flow amount, 70.00% in associated symptoms and 62.14% in VAS scale.

The symptomatic improvement was found that Average percentage of relief was **52.84%**. **It shows that effect of therapy was moderately significant.**

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