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Study of etiological factors of *Kashtartava* (dysmenorrhea) in urban population

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ABSTRACT

The lifestyle of today's women is getting changed due to modernization and sedentary life style. This has resulted in increase in number of diseases alarmingly like infertility, abortions, miscarriages, early menopause, breast cancers, cervical and ovarian cancers and many more gynaecological disorders. Such kind of unhealthy lifestyle, food habits, and psychological factors has affected the offspring also. *Kashtartava* is a broad term which covers all the problems and ailments that a woman may suffer from during or around menstruation. It includes both primary and secondary types of dysmenorrhea. Thus, 200 patients in the age-group of 12-25 years suffering from dysmenorrhea were registered for the survey study. Assessments of patients were done by scale based on symptoms of *Kashtartava* and assessment of *Ahara-Vihar* and *Manashetus*. In survey study it was found that, the *Hetus* and *Lakshana* found in patients of *Kashtartava* were nearly similar but the severity and number of *Hetus* and *Lakshana* in urban population were on higher side.

Key words: *Kashtartava, dysmenorrhea, urban population, gynaecological disorders.*

INTRODUCTION

The condition of dysmenorrhoea is explained in Ayurvedic literature in terms of *Kashtartava* / *Kukshishoola*, *Vatala Yoni, Udavartini Yonivyapad* (Ayurvedic names of disease under *Striroga* - Gynecology).[1] The causative factors, pathogenesis, symptoms and treatment are also described in Ayurveda and based on that, the increased '*Vata*' type of humors in the body is responsible for disease creation.[2] *Kashtartava* i.e. dysmenorrhea is most common gynaecological problem bringing the women to clinician. Various studies in India revealed that prevalence of dysmenorrhoeal varies from 33% to 79.67%.[3] However, the true incidence and prevalence of dysmenorrhea are not clearly established in India. One study shows overall prevalence of dysmenorrhea was 65.02% with 68.4% in urban and 61.2% in rural areas.[4] The difference in the prevalence of the urban and rural adolescent girls is not significant then also former is on higher side. Morbidity due to dysmenorrhea represents a substantial public health burden. It is one of the leading causes of absenteeism from school and work and is responsible for significant loss of earnings and diminished quality of life. Despite its high prevalence and associated negative effects, many women do not seek medical care for this condition.[5] This common problem results in number of physical and emotional symptoms and it also affects their quality of life. In many conditions, these girls suffer a lot and use OTC medications to manage the discomforts without medical supervision. It ultimately leads to mismanagement of *Kashtartava*. These types of self-medication and continuous medication affect the health. One of the studies says that dysmenorrhea

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ISSN: 2456-3110 ORIGINAL ARTICLE Jan-Feb 2019

can be better managed by mental preparation and by appropriate changes in lifestyle like regular physical exercise. The etiology of uterine pain in primary dysmenorrhea is still not established. But several risk factors have been identified, such as young age, early menarche, positive family history, nulliparity, stress/depression and smoking.[6]

The evaluation of *Lakshana* and pathogenesis of *Kashtartava* reveals similarity with Primary Dysmenorrhea in modern. *Kashtartava* is the *Tridoshaja Vatapradhana Vyadhi*, in which vitiation of mainly *Apana Vayu* and *Vyana Vayu* takes place. Many researches have been done in regards with *Kashtartava* but less many works has been done in relation to its etiological background. Therefore, an attempt is made to study etiological factors of *Kashtartava* in Urban population.

Aim and Objective

1. To study the etiological factors of *Kashtartava* (dysmenorrhea) in urban population.
2. Role of *Ahara Vihar* and *Manasik* etiological factors in *Samprapti* of *Kashtartava*.

Material and Methods

Study participants

In this survey study, total 200 patients were enrolled in trial from the OPD of Prasuti Tantra Evam Stri Roga department. Patients were screened in accordance with the inclusion and exclusion criteria mentioned in the protocol.

Cases collection

Cases were enrolled from school survey of urban and rural area. Total 200 cases were taken. 100 each in group A and group B. Informed written consent was taken for the study and detail history was taken.

Inclusion Criteria

- Female between 12-25 yrs. of age group.
- Female residing in urban area in Group A.
- Female residing in rural area in Group B.

Exclusion Criteria

- Female not willing for study.
- Female suffering from other major illness.
- Married women.

Table 1: Assessment of *Kashtartava*

Severity of pain (Multidimensional scoring pattern)	Score
Menstruation is not painful and daily activity unaffected	0
Menstruation is painful and daily activity not affected. No analgesic required.	1
Menstruation is painful and daily activity affected. Analgesic drug were needed.	2
Menstruation is painful, she cannot do even her normal routine work and has to absent from class / office during menses. Had to take analgesic but poor effect.	3

Duration	Score
No pain in menstruation	0
Pain persist less than 12 hours	1
Pain continue for 12-24 hours	2
Pain continue more than 24 hours	3

Artava Pramana (by number of Pad)	Score
6 – 7 pads/cycle	0
4 – 5 pads/cycle	1
2 – 3 pads/cycle	2
Spotting or 1 pad/cycle	3

ISSN: 2456-3110 ORIGINAL ARTICLE Jan-Feb 2019

Artavasrava Avadhi	**Score**
Duration of menses 4 – 7 days.	0
Duration of menses 3 days.	1
Duration of menses 2 days.	2
Duration of menses 1 day	3

Yatochitkala Adarshanam **(interval)**	**Score**
25-35 days	0
36-45 days	1
46-55 days	2
56-65 days	3

Praseka (Nausea)	**Score**
No Praseka	0
2 – 3 times/day	1
4 – 5 times/day	2
>5 times/day	3

Chhardi	**Score**
No Chhardi	0
Occasionally	1
1 - 2 times/day	2
More than 2 times/day	3

Vibandha **(Constipation)**	**Score**
No *Vibandha*	0
Frequency once in a day, but hard stool pass.	1
Frequency of stool alternate day and patient feels difficulty in defaecation.	2
frequency ones per 2-3 days, difficult in defication	3

Atisara **(Dhiarrhoea)**	**Score**
No Atisara	0
Occasionally	1
2 – 3 times/day and *Drava Mala Pravritti.*	2
More than 3 times/day *Drava Mala Pravritti.*	3

Shrama **(Fatigue)**	**Score**
No *Shrama*	0
Fatigue by single extra work other than daily routine.	1
Fatigue by normal daily routine.	2
Severe fatigue even without work.	3

Aruchi **(Loss of Appetite)**	**Score**
Takes full diet and also presence of properappetite at the next meal hour	0
Presence of moderate appetite and promote appearance of appetite in next meal hour	1
Presence of low appetite but delayed appearance of appetite in next meal hour.	2
Persisting low appetite or frequently losing appetite and unable to consume even low diet	3

Shirashula **(Headache)**	**Score**
No headache	0
Headache, ones in menstruation persist for less than 6 hours.	1
Frequent headache 2-3 times per menstruation, dailyactivity not affected	2
Persistent headache through out the menstruation, daily activity affected.	3

ISSN: 2456-3110 ORIGINAL ARTICLE Jan-Feb 2019

Vankshana Shula* (Tenesmus of the bladder), *Kati* and *Janu Shula	**Score**
No pain	0
Presence of all 03 < 1 hour / 02 features < 6 hrs / 01feature < 12 hrs.	1
Presence of all 03 1-2 hrs/ 02 features 6-12 hrs/ 01feature > 12 hrs.	2
Presence of all 03 > 2 hrs / 02 features 12-24 hrs./ 01 feature > 24 hrs.	3

***Swedadhikya* (Excessive sweating)**	**Score**
No sweating	0
Occurs only at working in hot or doing hard work	1
More in day time and when associated or following hot flushes only	2
Excessive sweating to that extend that patient feels like taking bath changing clothes	3

***Tamodarshana* (Faints)**	**Score**
No faints	0
Occasionally ones per menstruation	1
Faint per each menstruation.	2
More than 01 times per each menstruation.	3

Table 2: Assessment of *Ahara Hetu*

Repetition of *Hetu* in7 days	**Score**
0 - 2 / 7	0
3 - 4 / 7	1
5 - 6 / 7	2
7 / 7	3

Table 3: Assessment of *Vihara Hetu*

Divaswapa

Score	**Time**	**Days**
0	< 1 hr	1 / 7
1	1 hr	3-4 / 7
2	2 hr	5-6 / 7
3	≥ 3 hr	7 / 7

Ratrijagaran

Score	**Time**	**Days**
0	10 pm-12 am	1 / 7
1	1 am	3-4 / 7
2	2 am	5-6 / 7
3	>2 am	7 / 7

Vyayam

Score	**Time**	**Days**
0	Avyayam	1 / 7
1	15- 20 min.	3-4 / 7
2	30 -60 min.	5-6 / 7
3	>1 hr	7 / 7

Vegavarodha

Score	**Time**	**Days**
0	0	1 / 7
1	5min.	3-4 / 7
2	10min.	5-6 / 7
3	>15 min.	7 / 7

Vegodviran

Score	**Time**	**Days**
0	1 / days	1 / 7
1	2 / days	3-4 / 7
2	3 / days	5-6 / 7
3	4 / days	7 / 7

ISSN: 2456-3110 ORIGINAL ARTICLE Jan-Feb 2019

Table 4: Assessment of *Manas Hetu*

Shoka	**Class**	**Ans - Yes**	**Quantity**
	0	0	No
	1	1	Some Time
	2	2	Mostly
	3	≥ 3	Always
Krodha	0	0	No
	1	1	Some Time
	2	2	Mostly
	3	≥ 3	Always
Bhaya	0	0	No
	1	1	Some Time
	2	2	Mostly
	3	≥ 3	Always
Chinta	0	1	No
	1	2	Some Time
	2	3	Mostly
	3	≥ 4	Always

OBSERVATIONS AND RESULTS

The observations were noted from the specially designed Case Record Form. The 200subjects were observed for the study, 100 subjects were from urban area (Group A) and 100 subjects from rural area (Group B).

Table 5: Age wise distribution of patients.

Age	**Group A**	**Group B**	**Total**	**%**
13 - 15	77	23	100	50
16 - 18	16	68	84	42
19 - 21	7	9	16	8
Total	100	100	200	100

Table 6: Distribution of subjects according to symptoms in Group A and B

SN	**Symptoms**	**Chi-Square**	**P value**
1	*Ruja* (pain)	38.7	<0.001
2	*Udarshula* (abdominal pain)		
3	*Vankshanshula/katishula/janushula*(joint pain)	0.669	>0.05
4	*Yatochitkala Adarshanam* (interval)		
5	*Praseka* (Nausea)	0.493	>0.05
6	*Chhardi* (vomiting)	4.344	< 0.05
7	*Vibandha* (Constipation)	0.383	> 0.05
8	*Atisara* (Dhiarrhoea)	4.344	< 0.05
9	*Shrama* (Fatigue)	12.562	<0.001
10	*Aruchi* (Loss of Appetite)	7.769	> 0.05
11	*Shirashula* (Headache)	0.13	> 0.05
12	*Swedadhikya* (Excessive sweating)	2.806	> 0.05
13	*Tamodarshana* (Faints)	9.011	<0.01

Table 7: Distribution of subjects according to *Ahara Hetus.*

Hetu	**Groups**	**Mild (%)**	**Moderate (%)**	**Severe (%)**
Madhura	Group A	24	19	57
	Group B	21	28	51
Amla	Group A	16	2	82
	Group B	22	4	74
Lavana	Group A	39	37	24
	Group B	35	48	17
Katu	Group A	36	0	64
	Group B	42	0	58
Tikta	Group A	63	37	0
	Group B	51	59	0
Kashaya	Group A	100	0	0
	Group B	100	0	0

ISSN: 2456-3110 ORIGINAL ARTICLE Jan-Feb 2019

Vidahi	Group A	17	15	68
	Group B	19	17	64
Paryushitaanna	Group A	12	15	73
	Group B	15	17	66
Ajirnashana	Group A	20	13	67
	Group B	31	16	53
Viruddhashana	Group A	14	15	71
	Group B	16	6	78
Adhyashana	Group A	17	22	61
	Group B	22	19	59
Atyambupana	Group A	18	22	60
	Group B	15	18	67
Virudha	Group A	16	16	68
	Group B	34	13	63
Ajirnashana	Group A	20	13	67
	Group B	31	16	53

Table 8: Distribution of subjects according to according to *Vihara Hetus.*

Hetu	**Groups**	**Mild (%)**	**Moderate (%)**	**Severe (%)**
Vegadharana	Group A	43	12	45
	Group B	43	45	12
Vegaudgirana	Group A	63	33	4
	Group B	63	33	4
Diwaswap	Group A	59	38	3
	Group	65	33	2
	B			
Jagaran	Group A	66	29	5
	Group B	73	21	6
Vyayama	Group A	76	20	4
	Group B	75	16	9

Table 9: Distribution of subjects according to *Manas Hetus.*

Hetu	**Groups**	**Mild (%)**	**Moderate (%)**	**Severe (%)**
Shoka	Group A	5	19	76
	Group B	7	20	73
Krodha	Group A	0	7	93
	Group B	3	8	89
Bhaya	Group A	16	18	66
	Group B	38	12	50
Chinta	Group A	13	17	70
	Group B	6	20	74

DISCUSSION

Menstruation is the normal physiological process, when accompanied with pain called *Kashtartava*. *Kashtartava* is a gynecological medical condition of pain during menstruation that interferes with daily activities. Though it is not a fatal disease but it is the most common cause of abscentism of young women from the school, colleges and offices. Several studies have shown that adolescents with dysmenorrhea report that, it affects their academic performance, social and sports activities. It is very disturbing phenomenon for the young women and it suffers a lot at the crucial period of their life. Not only pain but many other discomforts are present which interferes with their daily routine. There occurs severe abdominal pain with aches and pains in whole body. Females also suffer from anorexia and other gastrointestinal disturbances. Along with physical

ISSN: 2456-3110 ORIGINAL ARTICLE Jan-Feb 2019

disturbances; psychological changes are also hampering their daily life. Considering its higher prevalence the disease is selected for the study.

Most of the subjects (50%) were in the age group of 13-15 yrs., followed by 42% in the age group of 16-18 yrs. Only 8% of subjects were from age group of 19-21yrs. Maximum symptoms were noted in the young girls who were near to the menarche period. As the age increases, the tolerance increases and this may be possible reason for reduction in symptom in elder age group. In this study, 57% subjects were having *Atyadhika Sevana* of *Madhura Rasa* in group A and 51% in Group B. *Madhura Rasa* increases the *Kapha* which is responsible for *Margavarodhajanya Vata Prakopa* ultimately leading to *Kashtartava*.[7] 68% patients were taking *Vidahi Ahara* in Group A and 64% in Group B. It causes *Pittavruddhi* and *Rakta Dushti*.[8] *Viruddhashana* was found in 71% in Group A and 78% in Group B. *Viruddhashana* causes *Dosha Utklesh* but resist the *Dosha* to expel out from the body.[9] *Avyayama* causes *Agni Dushti, Kapha Vriddhi* and formation of Aama which is cause for *Avaranajanya Kashtartava*.[10] *Vegadharana* was found most of patients. *Vata, Mutra, Mala Vegavarodha* causes *Apana Vayu Dushti* which lead to *Pakvashayashrita Vyadhi Utpatti.* This *Udavartit Apana Vayu* causes *Awarodh* to the menstrual flow which tries to resist the *Awarodh* leading to *Kashtartava*.[11] In this study, about 93% of subjects in Group A and 89% in Group B were having Krodha, 76% in Group A and 73% in Group B subjects were having *Shoka*, and 70% in Group A and 74% in Group B subjects were having *Chinta*. *Chinta, Shoka, Bhaya* lead to *Vata Prakopa* and *Krodha* is responsible for the *Prakopa* of *Pitta Dosha*. Again *Chinta* is responsible for the *Rasavaha Srotodushti* and *Kshaya* of *Rasa Dhatu* leading to *Dushti* and *Kshaya* of *Artava*.[12]

Samprapti of *Kashartava*

In the present study, most of the *Hetus* found in subjects of urban area are *Santarpana Hetus*. The fast food culture and sedentary life style leads to *Amavarodhajanya Vata Prakopa*, which is found to be the root cause of the disease. Due to *Kaphaprakopak Ahara Vihara* and absence of *Vyayama*, *Agni* gets *Manda* leading to *Amotpatti*. This causes *Amavarodhajanya Vata Prakopa* also *Vegavidharana Vegaudgirana* like *Hetus* make *Apana Vayu Dushti* which causes obstruction in the flow of *Artava*. But *Artava* is trying to overcome this resistance caused by *Apana Vayu*. Spasm takes place during the menstrual flow resulting in painful menstruation i.e. *Kashtartava*.

CONCLUSION

In this survey it was observed that, Urban and Rural population shows the *Hetus* (causative factors) and *Lakshana* (Symptoms) found in patients of *Kashtartava* were nearly similar, but the severity and number of *Hetus* and *Lakshana* in urban population were on higher side. Among *Vihara Hetu*; *Avyayama*, *Vegavarodha* (*Mala, Mutra, Apana Vayu Vega Avarodha*) are found to very common etiological factors of *Kashtartava*. Not following *Rajasvalacharya* during menstrual period is also one of cause of *Kashtartava*. Excess intake of *Madhura Rasa* in diet, *Vidahi Ahara, Viruddhashana* were also found to be responsible for *Vata Prakopa* and *Pittavruddhi*, *Rakta Dushti* ultimately leading to *Kashtartava*. *Manasa Hetu* in the form of *Chinta, Shoka, Bhaya* and *Krodha* are also found to be predisposing factors for *Kashtartava*.

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ISSN: 2456-3110 **ORIGINAL ARTICLE** Jan-Feb 2019

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