

CROSS-SECTIONAL STUDY ON PREVALENCE OF *PRAMEHA* IN FEMALES WITH
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ABSTRACT

Ayurveda gives due importance to *Suddha Artava*. Infrequent menstruation, scanty menstrual flow either in amount or duration, associated with vaginal pain are the symptoms of *Artavakshaya*. This can be compared with oligomenorrhea and hypomenorrhea, based on their signs and symptoms. In present era, there is high prevalence of this condition in the society. In *Sushruta Samhitha*, *Prameha nidana* chapter *Gayadaasaacharya* has mentioned that, "Due to regular menses women's body gets detoxified every month, so they aren't affected by *Prameha*". Keeping it under consideration an observational study was carried out to evaluate impact of reduction in *Arthavasaava* leading to *Prameha* by observing *prameha* prevalence. A total of 60 subjects who were fulfilling the criteria for inclusion were selected for the study from the Outpatient Department of *Stree Roga*, SJIIM Hospital, Government Ayurveda Medical College, Bengaluru during 2020-2021. The diagnosed subjects of *Artavakshaya* were subjected to case proforma. The method of survey was by a questionnaire enlisting *poorvaroopta* and *roopa* of *Prameha*. The study showed that among 60 subjects, none of the subjects exhibited *Lakshanas* of *Prameha* suggesting the prevalence of *Prameha* as nil. *Prameha Purvarupa* was observed only in 1 subject. In this study it was evident that *Alpasraava* of *Artava* doesn't accelerate the manifestation of *Prameha*.

KEYWORDS: *Artavakshaya*, *Prameha*, *Alpartava*.

INTRODUCTION

In women normal menstruation represents the hormonal and gynaecological health of a female reproductive system. It is controlled by hypothalamus pituitary ovarian axis and other associated hormones.^[1] *Ayurveda* gives due importance to *Suddha Artava* and mention that *Artava Dushti* is one of the causative factors for infertility.^[2] Menstruation is an essential physiological phenomenon in women during reproductive age which involves, shedding of endometrium which was prepared to provide a bed for fertilized gamete, when fails results into menstruation.^[3] In *Ayurveda* it is explained as *Masanumasika Raja Pravrutti* or *Artava Pravrutti*.^[4] *Artava* or menstrual blood is expelled from the uterus through vagina in biological rhythm during a woman's reproductive period i.e., from menarche to menopause.^[5,6] The amount of menstrual discharge varies from person to person. *Acharya Charaka* has stated that the normal menstruation is that which has interval between two menstrual cycles of one month, duration of menstrual bleeding of five days, not associated with pain or burning sensation and in quantity it should not be very scanty or excessive in amount.^[7] *Artavakshaya* is characterised by *Yathochita Kala Adarshanam*, *Alpartava* and *Yonivedana*,^[8] indicating

delayed menstruation, scanty menstrual flow both in amount or duration, associated with pain in lower abdomen or vagina. A recent study in Salem revealed Fasting blood glucose levels were found to be very high among amenorrhea subjects.^[9] In *Sushruta Samhitha*, *Prameha nidana* chapter *Gayadaasaacharya* has quoted a reference which states "Due to regular menses women's body gets detoxified every month, so they aren't affected by *Prameha*".^[10] Same is mentioned by *Bhavamishra*.^[11] Keeping it under consideration this is an attempt to observe whether reduction in *arthavasaava* results in manifestation of *Prameha*. This kind of studies has not been conducted until now. It aims to shed fresh light on the *Prameha* in Females for the early diagnosis which ensures the timely treatment of it.

AIM AND OBJECTIVES

- To determine the prevalence of *Prameha* among females with *Artavakshaya* of age group 20 to 40 years in SJIIM, Bengaluru.
- To find out the prevalence of *Purvarupa* of *Prameha* in *Artavakshaya* subject.
- To check the FBS & PPBS values in *Artavakshaya* subject.

MATERIALS AND METHODS

Patients

The subjects who registered in the OPD of Sri Jayachamarajendra Institute of Indian Medicine, Bengaluru during 2020-2021 were the primary source of data. 60 subjects who were fulfilling the criteria for inclusion were selected for the study randomly irrespective of religion, educational, professional background and economic status. Informed consent was taken after explaining the purpose of the study in detail in non-technical terms verbally. The study being part of PG study was approved by Institutional Ethics Committee of Government Ayurveda Medical College, Bengaluru.

Inclusion criteria

- ✓ Subject willing to give consent to the study.
- ✓ Female subject aged between 20-40 years with minimum history of 3 months *Artavakshaya* symptoms.

Exclusion criteria

- ✗ Subject who is Pregnant & lactating women.
- ✗ Subject attained Menopause.
- ✗ Subject having family history of DM.
- ✗ Subject suffering from Juvenile Diabetes, Psychogenic Polydipsia and Cranial Diabetes insipidus.
- ✗ Subject suffering from congenital anomalies like Absence of ovaries, Ovarian agenesis, Imperforate hymen & vagina, Absence of vagina & congenital absence of uterus.
- ✗ Subject undergone Hysterectomy.
- ✗ Subject suffering from serious illness like Chronic Kidney Disease.
- ✗ Subject undergoing Diuretic/Fluid therapy.
- ✗ Subject undergone Hormonal therapy in the last 3 months.

Study Design

A special case proforma was prepared with details of history taking, menstrual history, physical signs and symptoms as mentioned in our classics along with questionnaire. The subjects were free to withdraw from survey or they had the right to not to answer any question at any given time and were assured of confidentiality of data. The data recorded and further analyzed.

Questionnaire

1. Have you noticed increase in urine frequency/quantity?
2. Have you observed change in urine quality like color/consistency/smell?
3. Do you experience tingling/burning sensation in palms or sole?
4. Do you feel increased sliminess/stickiness/heaviness in body?
5. Do you experience sweet taste in mouth?
6. Do you feel tired, exhausted and sleepy always?
7. Do you feel increased thirst or dryness of mouth-

palate-throat?

8. Do you feel bad odour from your body recently?
9. Do you feel difficulty in breathing recently?
10. Do you experience frizzy/tangled hair?
11. Have you observed increased growth of hairs & nails?
12. Do you have increased discharge in the eyes or wax collection in ears or coating over teeth/tongue?

Diagnostic criteria

- Diagnosis was made on the basis of signs and symptoms of *Artavakshaya*.
- Subject with minimum history of 3 months *Artavakshaya*, was screened for *Prameha* based on signs and symptoms mentioned in the classics.

Investigations

Subjects were screened for

- 1) FBS
- 2) PPBS
- 3) Urine sugar, protein, ketone bodies.

RESULTS AND DISCUSSION

Table 1: Distribution of subjects as per BMI.

BMI	No of subjects	Percentage
19-19.99	3	5%
20-20.99	10	16.67%
21-21.99	11	18.32%
22-22.99	10	16.67%
23-23.99	7	11.67%
24-24.99	7	11.67%
25-25.99	6	10%
26-26.99	3	5%
27-27.99	0	0%
28-28.99	3	5%

- a) Totally 60 subjects were registered for the present study. The data showed 5% (3) subject's bmi was in the range of 19-19.99 Kg/m², 16.67% (10) subject's bmi was in the range of 20-20.99 Kg/m², 18.32% (11) subject's bmi was in the range of 21-21.99 Kg/m², 16.67% (10) subject's bmi was in the range of 22-22.99 Kg/m², 11.67% (7) subject's bmi was in the range of 23-23.99 Kg/m², 11.67% (7) subject's bmi was in the range of 24-24.99 Kg/m², 10% (6) subject's bmi was in the range of 25-25.99 Kg/m², 5% (3) subject's bmi was in the range of 26-26.99 Kg/m², 5% (3) subject's bmi was in the range of 28-28.99 Kg/m². The above data shows that both normal weight and overweight individuals were suffering from *Artavakshaya*.

Table 2: Distribution of subjects as per *lakshana*.

Lakshana	No of subjects	Percentage
<i>Prabhoota mutra</i>	0	0%
<i>Aavila mutra</i>	0	0%
None	60	100%

b) None of the subjects had *pratyatma lakshanas* of *Prameha*.

Table 3: Distribution of subjects as per *purvarupa*.

<i>Purvarupa</i>	No of subjects	Percentage
<i>Hastapaadataala Daaha</i>	4	6.67%
<i>Snigda Picchila Gaatra</i>	4	6.67%
<i>Guru Gaatra</i>	12	20%
<i>Madhura Shukla Mutra</i>	0	0%
<i>Madhuraasyata</i>	4	6.67%
<i>Tandra</i>	6	10%
<i>Saada</i>	24	40%
<i>Mukhagalataalu Sosha</i>	6	10%
<i>Daurgandhya</i>	21	35%
<i>Shwasakruchrata</i>	18	30%
<i>Jatilakesha</i>	19	31.67%
<i>Keshanakha Vruddhi</i>	1	1.67%
<i>Taalugalajihwadanta Mala Utpatti</i>	2	2.33%
<i>Akshikarna Vit Vruddhi</i>	6	10%

c) Data about *purvarupa* showed 6.67% (4) subjects had *Hastapaadataala Daaha*, 6.67% (4) subjects had *Snigdapicchila Gaatra*, 10% (6) subjects had *Guru Gaatra*, none of them had *Madhura Shukla Mutra*, 6.67% (4) subjects had *Madhuraasyata*, 10% (6) subjects had *Tandra*, 40% (24) subjects had *Saada*, 10% (6) subjects had *Mukhagalataalu Sosha*, 35% (21) subjects had *Daurgandhya*, 30% (18) subjects had *Shwasakruchrata*, 31.67% (19) subjects had *Jatilakesha*, 1.67% (1) subjects had *Keshanakhavruddhi*, 2.33% (2) subjects had *Taalugalajihwadanta Mala Utpatti*, 10% (6) had *Akshikarnavit Vruddhi*.

Table 4: Distribution of subjects as per number of *purvarupa*.

No of <i>Purvarupa</i>	No of subjects	Percentage
0	2	3.33%
1	12	20%
2	31	51.67%
3	11	18.33%
4	3	5%
8	1	1.67%

d) 3.33% (2) subjects didn't have any *Purvarupa*, 20% (12) subjects had single *Purvarupa*, 51.67% (31) subjects had 2 *Purvarupas*, 18.33% (11) subjects had 3 *Purvarupas*, 5% (3) subjects had 4 *Purvarupas*, 1.67% (1) subject had 8 *Purvarupas*.

Table 5: Distribution of subjects as per urine sugar.

Urine sugar	No of subjects	Percentage
Present	0	0%
Absent	60	100%

e) Urine sugar was found to be absent in all subject's urine sample.

Table 6: Distribution of subjects as per urine protein.

Urine protein	No of subjects	Percentage
Present	0	0%
Absent	60	100%

Table 7: Distribution of subjects as per urine ketone bodies.

Urine ketone bodies	No of subjects	Percentage
Present	0	0%
Absent	60	100%

f) It was observed that protein and ketone bodies were absent in every subject's urine sample.

Table 8: Distribution of subjects as per FBS.

FBS in mg/dl	No of subjects	Percentage
70-80	7	11.67%
81-90	33	55%
91-100	15	25%
100-110	4	6.66%
111-120	1	1.67%

g) 11.67% (7) subjects had FBS between 70-80mg/dL, 55% (33) subjects had FBS between 81-90mg/dL, 25% (15) subjects had FBS between 91-100mg/dL, 6.66% (4) subjects had FBS between 101-110mg/dL, 1.67% (1) subject had FBS between 111-120mg/dL. Lowest FBS value observed in an individual was 75mg/dL and highest was 115mg/dL. Mean FBS was 88.88mg/dL, median was 87mg/dL and mode-83mg/dL. 8.24 was standard deviation 1.063 was standard error. It is interesting to note that among 60 subjects, 59 subjects had FBS below 110mg/dL, only 1 subject had above 111mg/dL (115mg/dL). So, it's clear that all the subjects had FBS below normal range i.e., within 120mg/dL.

Table 9: Distribution of subjects as per PPBS.

PPSBS in mg/dl	No of subjects	Percentage
91-100	1	1.67%
101-110	28	46.67%
111-120	21	35%
121-130	8	13.33%
131-140	2	2.33%

h) 1.67% (1) subject had PPBS between 91-100mg/dL, 46.67% (28) subjects had PPBS between 101-110mg/dL, 35% (21) subjects had PPBS between 111-120mg/dL, 13.33% (8) subjects had PPBS between 121-130mg/dL, 2.33% (2) subjects had PPBS between 131-140mg/dL. Lowest PPBS value observed in an individual was 99mg/dL and highest was 137mg/dL. Mean PPBS was 112.95mg/dL, median was 111mg/dL and mode-116mg/dL. 8.45 was standard deviation 1.09 was standard error. From the above data, it is evident that all the subjects had PPBS below normal range i.e., within 140mg/dL.

During the study it was observed that, less flow of menstrual blood wasn't present in every cycle of the subject having irregular menstruation. Sometimes, in between the cycle excessive bleeding was observed. *Acharyas* have mentioned absence of *Prameha* in females as they opine that *Doshas* are excreted along with *Artava*. By *Arthaprapti* and *Yukti Pramana*, it is understood that, *Alpasraava* may be excreted along with *Artava* in *Artavakshaya*. Thus, it may take longer duration to aggregate the amount of *Dosha* required in the body for *Samprapti* of *Prameha*. So, it will be wise to check the presence of *Prameha* in females with complete cessation of *Artava* like in *Artavanasha* (conditions like cryptomenorrhoea and post hysterectomy subjects etc) which gives better idea about the statement of *Acharyas*. In this study it was evident that *Alpasraava* of *Artava* doesn't accelerate the manifestation of *Prameha*. In this study it was observed that most of the subjects had 4 or less than 4 number of *Purvarupas*. The subject who had 8 *Purvarupas* was having menstrual irregularity from the past 15 years. This suggests that *Sthanasamshraya avastha* of *Prameha* was seen in an individual with history of menstrual irregularity from the past 15 years. To be precise its 1.67% (1) among 60 subjects. For further understanding it is better to conduct the study in individuals of similar age and suffering from menstrual irregularity for same duration.

CONCLUSION

- The prevalence of *Prameha* in females with *Artavakshaya* was nil, as none of the subjects exhibited *Lakshanas* of *Prameha*.
- *Prameha Purvarupa* was observed in 1 subject, among 60 subjects. Thus, the prevalence of *Purvarupa* of *Prameha* in females with *Artavakshaya* is 1.67%.
- The screening of FBS and PPBS of all the subjects showed values within normal limits.
- In urine analysis, noticeable amount of sugar, protein and ketone bodies was not observed in any subject's urine sample.

On the basis of above observations, it can be concluded that *Alpasraava* of *Artava* doesn't accelerate the manifestation of *Prameha*.

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