

## Efficacy of Aharaj Rajaswalacharya on Kashtartava wsr to Primary dysmenorrhea: A Pilot Study

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### ABSTRACT

**Introduction:** Dysmenorrhea, characterized by painful menstrual cramps, significantly impacts the quality of life for many women. It is broadly classified into two types — *primary dysmenorrhea* (also called *spasmodic dysmenorrhea*), which occurs without underlying pelvic pathology, and *secondary or congestive dysmenorrhea*, which arises due to identifiable causes such as endometriosis or pelvic inflammatory disease. The clinical presentation of *Kashtartava* closely parallels that of *primary dysmenorrhea*, as both are characterized by painful uterine contractions during menstruation without structural abnormalities. Ayurvedic texts attribute this condition mainly to *Vāta* vitiation (particularly *Apāna Vāta*), leading to spasmodic pain in the lower abdomen and pelvic region.

**Methods:** A cohort of 10 women aged 14-30 years with primary dysmenorrhea was selected for this study. Participants were instructed to follow dietary modifications (*Havishyanna* i.e., *Shali*, *ilk*, *Yava*, *Ghrita* 30 gm TDS, as per *Ayurvedic* classics during their menstrual phase for three consecutive cycles. Dietary modifications included intake of warm, easily digestible foods, and avoidance of cold and heavy foods. Pain intensity was measured using a Visual Analog Scale (VAS) and WaLIDD score before and after the intervention.

**Results:** Data analysis showed a marked reduction in the intensity of menstrual pain among participants. The mean VAS score decreased from 6.8 (pre-intervention) to 2.3 (post-intervention) ( $p < 0.01$ ). The mean WaLIDD score decreased from 6.5 (pre-intervention) to 1.6 (post- intervention) ( $p < 0.01$ ). Additionally, participants reported relief in other menstrual symptoms, such as bloating and fatigue.

**Conclusion:** Dietary modifications as per *Ayurvedic* classics show promise in managing Primary dysmenorrhea, providing a natural and holistic approach to alleviate menstrual pain and associated symptoms. This pilot study lays the groundwork for future research to explore and traditional dietary practices..

**Keywords:** *Ayurvedic Diet, Dysmenorrhea, Havishyanna, Rajaswalacharya, Udvartini Yonivyapad*

### 1. INTRODUCTION

In today's era of changing work-life balance and lifestyle patterns, menstrual health concerns such as dysmenorrhea have become increasingly common. Studies indicate that approximately 50-90% [1] of adolescent girls and young women experience dysmenorrhea to varied degrees. This disorder is a significant factor contributing to the high rates of school and work absences among young women in India, which has a detrimental impact on their daily routines and overall quality of life. Although dysmenorrhea is a common condition, it is frequently not recognized or treated properly due to cultural and societal stigmas around menstruation.

Modifying one's diet can greatly affect the management of Primary dysmenorrhea. *Ahara*, *Nidra*, and *Brahmacharya* are the three pillars of a human life. *Pathya* holds significant importance in *Ayurveda*.

Person consuming the diet that is advantageous, well-organized, and appropriate for calming doshas such as *Vata* and others, does not need any medication. And a person not consuming such diet, then also there is no use of taking any medication.[2]

The Paricharyas, including Dincharya, Ratricharya, Ritucharya, and particular practices for Women such as Rajaswala Paricharya, Garbhini Paricharya, Prasava Paricharya, and Sutika Paricharya, all highlight the do's and don'ts. Paricharyas mostly encompass the preventive aspect. Rajaswala, on the other hand, pertains to the prescribed routines to be observed during menstruation in order to uphold the Shuddha Artava Lakshana, which entails that the monthly blood should not be sticky, the flow should not exceed 5 days, and the quantity should be neither excessive nor insufficient. The color of blood can range from the hue of gunja fruit or Padma (lotus) to Aalakta or Indragopaka insect [3].

In addition to the different Viharas, the practice also involves consuming 'Havishya bhojana', also known as *Havishya Anna*. This refers to a traditional Indian meal that is commonly associated with rituals and offerings, especially in the context of *Vedic* rites. The meal is uncomplicated and follows the principles of *Sattva*.

This pilot study aims to observe the impact of dietary adjustments based on classical principles during the menstrual phase on Primary dysmenorrhea.

## 1.2 Need For The Study

Menstrual problems can occur when there are changes in hormone levels that disrupt the Hypothalamic-Pituitary-Ovarian-Uterine (HPOU) axis, which regulates the menstrual cycle. *Ayurveda* provides herbal and non-toxic options that can be advantageous in the management of *Kashtartava* (dysmenorrhea). The objective of this study is to evaluate the efficacy of dietary components (*Aahar Kalpana*) in the treatment of *Kashtartava*.

There is still very limited research exploring how diet and lifestyle (*Āhāra* and *Vihāra*, collectively known as *Paricharyā*) influence *Kashtartava*—the Ayurvedic counterpart of primary dysmenorrhea. Although classical Ayurvedic texts emphasize the importance of wholesome food and balanced routines during menstruation, modern scientific validation of these recommendations remains sparse. To begin addressing this gap, the present pilot study was undertaken to observe the effect of a specific dietary regimen including *Yava* (barley), *Śāli* (rice), *Ghrīta* (clarified butter), *Kshīra* (milk), and *Śarkarā* (sugar) on the severity of *Kashtartava*. A pilot design was intentionally chosen to test the feasibility and acceptability of these interventions and to generate preliminary insights before planning a larger, more comprehensive clinical trial.

The objective is to provide novel perspectives on dietary interventions for menstruation diseases and present alternate remedies to pain relievers, NSAIDs, and traditional hormonal therapies, among others.

## 2. AIM AND OBJECTIVES

**Aim:** To observe the Efficacy of *Aahara Kalpana* (dietary modification) in management of primary dysmenorrhea.

**Objectives:** To study the effect of Ahara Kalpana in management of primary dysmenorrhea.

## 3. METHODOLOGY

**Study design:** This was an observational, prospective pilot clinical study conducted to evaluate the effect of Ahara Kalpana (dietary modification) on *Kashtartava* (primary dysmenorrhea).

**Study Setting and Duration:** The study was conducted at the Department of Prasuti Tantra and Striropa, Parul Institute of Ayurved, Parul University. Ethical approval was obtained from the Institutional Ethics Committee prior to commencement.

Participants

### Inclusion criteria

Patients diagnosed with dysmenorrhea were selected randomly.

Age groups between 14 to 30 years were selected.

Patients suffering from dysmenorrhea for more than 2 consecutive cycles.

Married and unmarried women were incorporated for the study.

### Exclusion criteria

Women with Irregular menstrual cycles.

Secondary dysmenorrhea.

IUCD

Women diagnosed with congenital anomalies of reproductive tract.

Other medical disorders which make patient at high risk, like Epilepsy, Anaemia (Haemoglobin <7gm), Heart disease, Diabetes, Bronchial Asthma.

**Sample size:** 10 Patients were enrolled and evaluated

#### 4. INTERVENTION

**Table no. 1: Dietary Intervention**

<b>Diet</b>	<i>Yava, Shali, Ghrita, Ksheera</i>
<b>Kalpana</b>	<i>Ahar Kalpana</i>
<b>Duration</b>	1 <sup>st</sup> 3 days of each month menstrual cycle
<b>Matra</b>	As per required

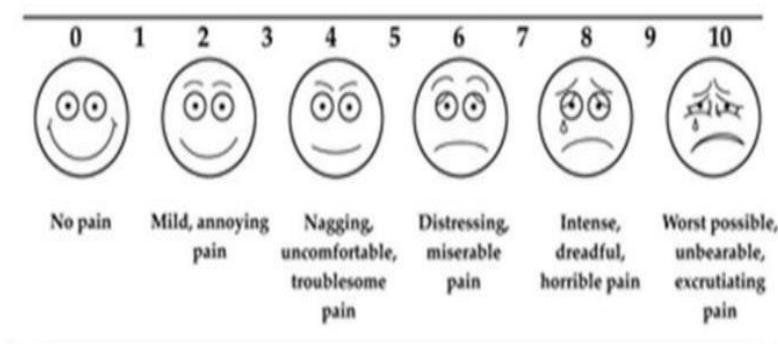
Patients were advised to consume *Shali* (*Oryza sativa*), *Yava* (*Hordeum vulgare*), *Ksheera* (*Milk*) and *Ghrita* during the first three days of menstruation. Patient was advised to avoid any fast food, packaged items, aerated drinks and stale food during this time. The combination and quantity were varying according to the *Satmyata* and *Agni* of the participants. They were free to choose either *Yava* or *Shali* or both during first 3 days of menstruation.

**Table no. 2: Rasa Panchaka of Havishya Anna**

<b>Havishyanna</b>	<b>Rasa</b>	<b>Guna</b>	<b>Virya</b>	<b>Vipaka</b>	<b>Karma</b>
<b>Shali</b>	Madhuar	Laghu Snigdha	Sheeta	Madhura	<i>Alpavarcakaraka, Brahmana, Mutrala</i>
<b>Yava</b>	Kasaya, Madhura	Guru, Ruksha	Sheeta	Katu	<i>Medohara, Kapha-Pittahara, Balya</i>
<b>Ksheera</b>	Madhura	Laghu	Sheeta	Madhura	<i>Tarpana, Brahmana, Vatahara</i>
<b>Ghrita</b>	Madhura	Snigdha, Guru, Mrudu	Sheeta	Madhura	<i>Agnivrdhak, Oja Vardhak, Vata-Pittahar</i>

#### 3.5 Assessment parameters

VAS Score Figure 1: VAS Score



## WaLIDD score

Table no. 3: WaLIDD score

Working ability	location	intensity	Days of pain
0 None	0 None	0 Does Not Hurt	0 Zero
1 Almost Never	1 One Site	1 Hurts A Little Bit	1 One -Two
2 Almost Always	2 Two-Three Sites	2 Hurts A Little More- Hurts Even More	2 Three-Four
3 Always	3 Four Sites	3 Hurts Worst	3 >Five

## 5. RESULTS

A total of 14 individuals were screened; 10 met inclusion criteria and consented to participate. All participants completed the three-cycle intervention period; no dropouts occurred.

Table 4: Participant Flow Summary

Stage	Number of Participants	Remarks
Screened	14	Assessed for eligibility
Enrolled	10	Met inclusion criteria
Completed study	10	No attrition or withdrawal

**Baseline data:** Participants were aged 14–30 years (mean  $21.8 \pm 3.9$  years). All had regular menstrual cycles and reported moderate to severe pain for  $\geq 2$  consecutive cycles. Baseline mean VAS = 6.8; WaLIDD = 6.5

This study investigated the effects of dietary modifications based on Ayurvedic classics on dysmenorrhea. The results, as illustrated in various graphs, show significant reductions in the severity and duration of pain and associated symptoms among participants:

**VAS Score:** The mean Visual Analog Scale (VAS) score for pain intensity decreased from 6.8 to 2.3.

**WaLIDD Score:** The mean WaLIDD score, which assesses the overall impact of dysmenorrhea, dropped from 6.5 to 1.6.

**Duration of Pain:** The mean duration of pain reduced from 1.5 to 1.

**Intensity of Pain:** The mean intensity of pain fell from 6.8 to 2.3.

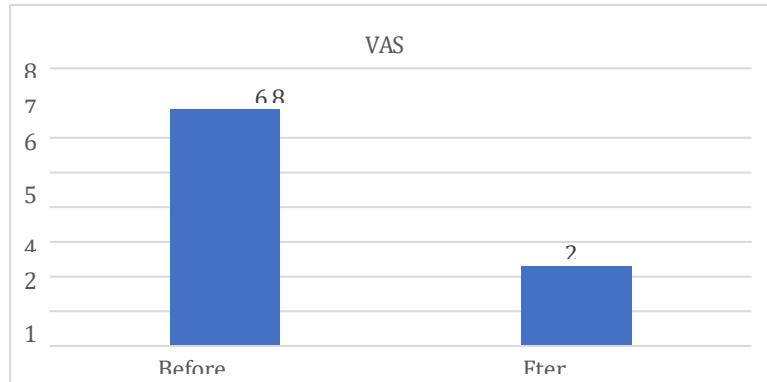
**Lower Abdominal Pain:** The mean value for lower abdominal pain decreased from 4.2 to 1.1.

**Back Pain:** The mean value for back pain reduced from 4.1 to 1.

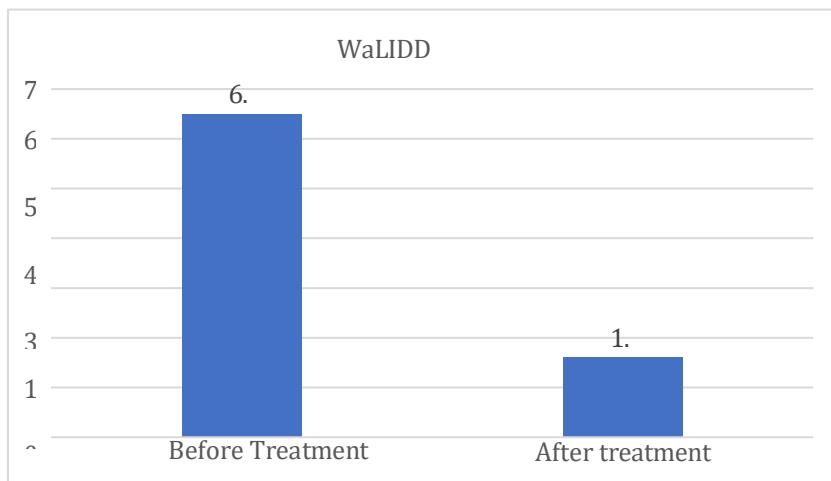
**Nausea:** The mean value for nausea dropped from 2.1 to 0.

**Vomiting:** The mean value for vomiting decreased from 0.2 to 0.

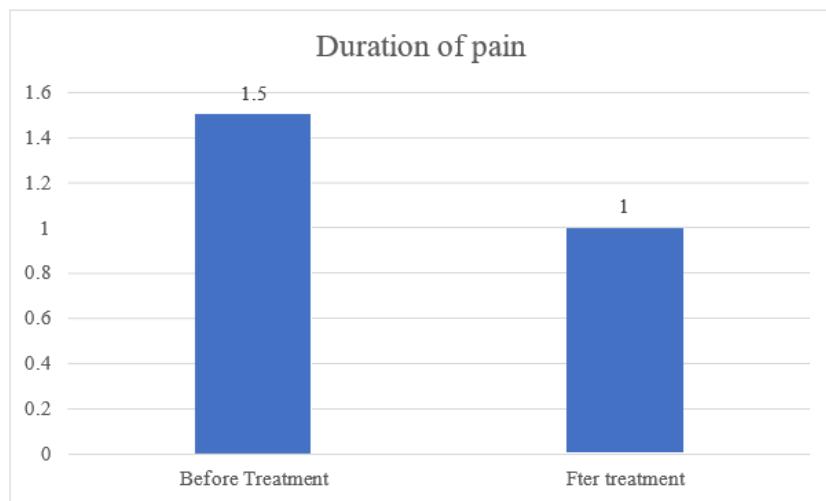
**Leg Cramps:** The mean value for leg cramps fell from 2.2 to 0.2.



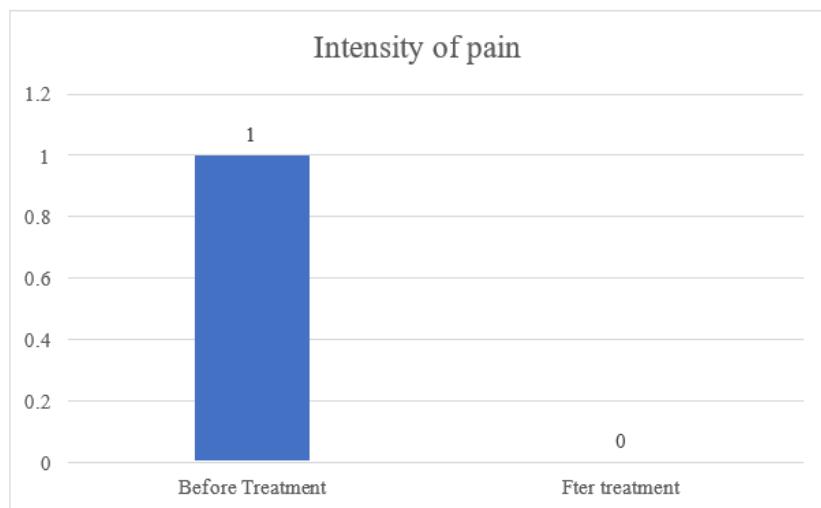
**Graph 1: Showing the reduction of mean value from 6.8 to 2.3 of VAS score before and after treatment**



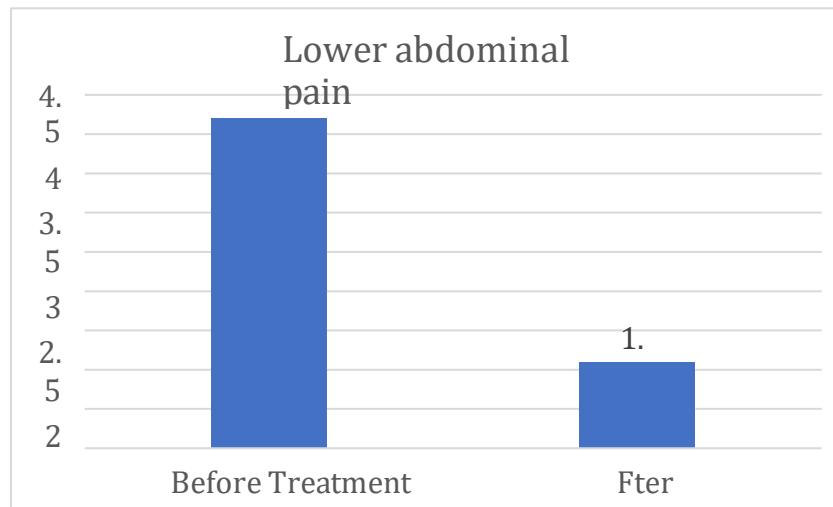
**Graph 2: Showing the reduction of mean value from 6.5 to 1.6 of WaLIDD score before and after treatment**



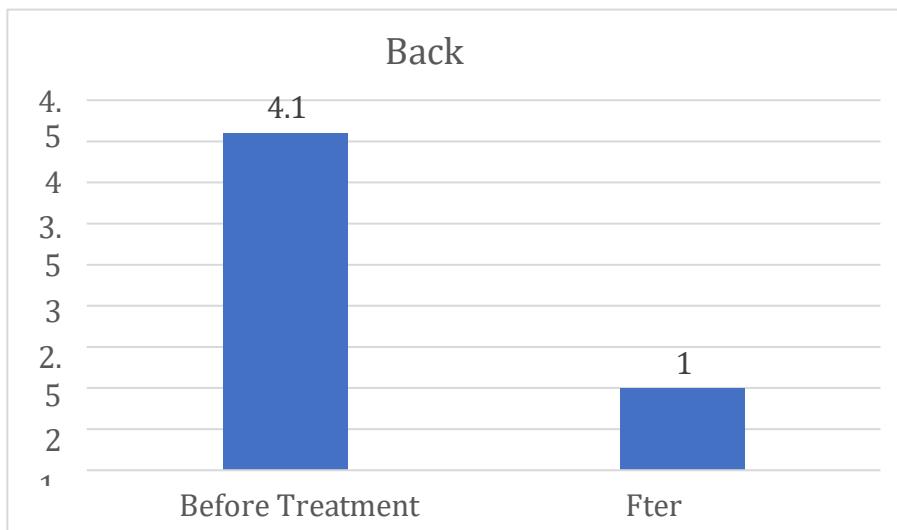
**Graph 3: Showing the reduction of mean value from 1.5 to 1 of duration of pain before and after treatment**



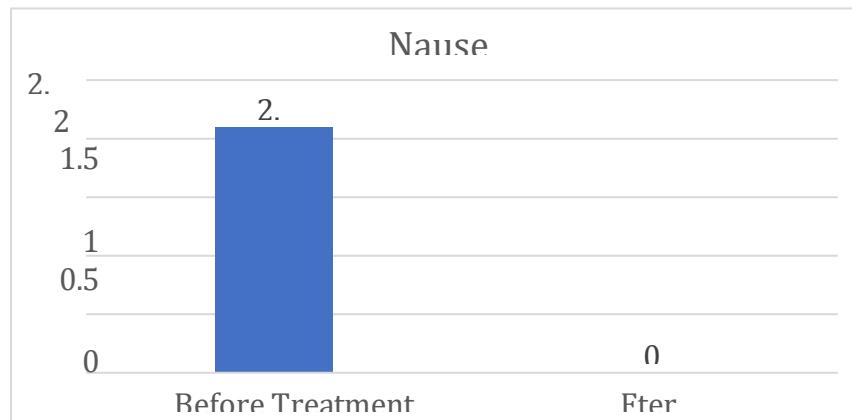
**Graph 4: Showing the reduction of mean value from 1 to 0 in intensity of pain before and after treatment**



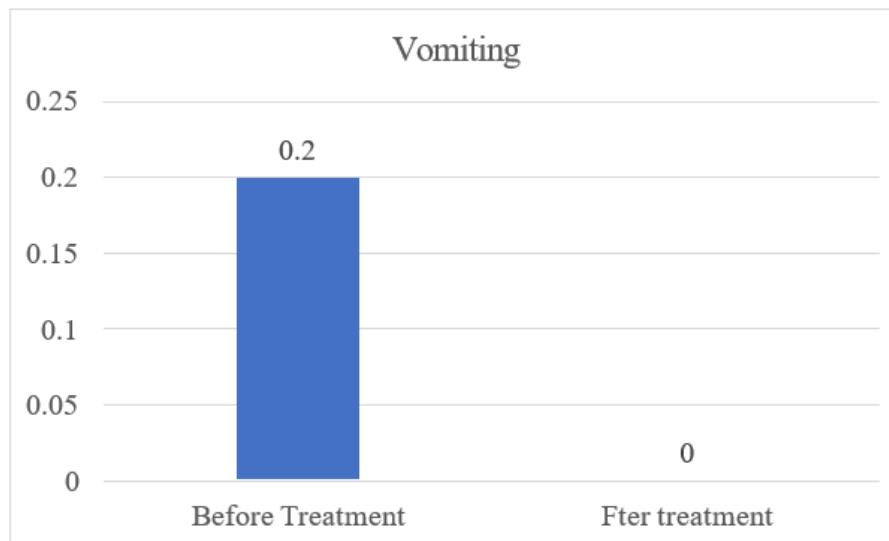
**Graph 5: Showing the reduction of mean value from 4.2 to 1.1 for lower abdominal pain before and after treatment**



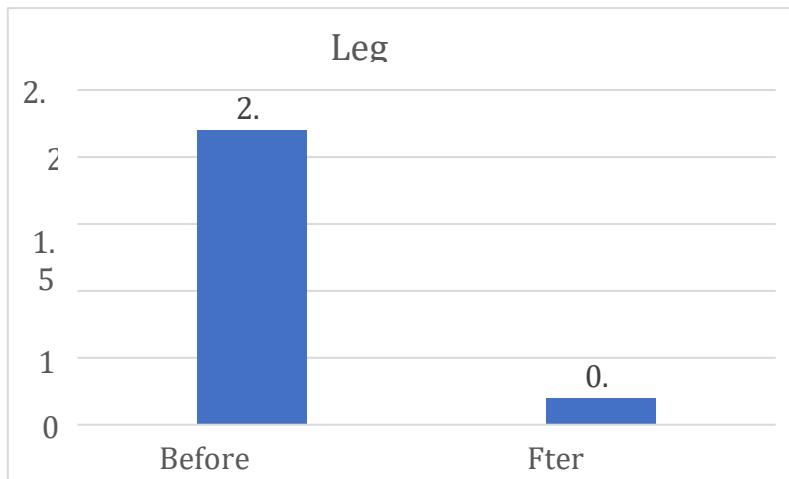
**Graph 6: Showing the reduction of mean value from 4.1 to 1 for back pain before and after treatment**



**Graph 7: Showing the reduction of mean value from 2.1 to 0 for nausea before and after treatment**



**Graph 8: Showing the reduction of mean value from 0.2 to 0 for vomiting before and after treatment**



**Graph 9: Showing the reduction of mean value from 2.2 to 0.2 for leg cramps before and after treatment**

## 6. DISCUSSION

The substantial reductions in the VAS and WaLIDD scores indicate that the dietary changes prescribed in *Ayurvedic* classics significantly alleviated the overall pain and impact of dysmenorrhea. The decrease in both the intensity and duration of pain suggests that these dietary modifications can help manage the core symptoms of dysmenorrhea effectively.

### Lower Abdominal and Back Pain

The significant reduction in lower abdominal and back pain highlights the potential of *Aharaj Rajaswalacharya* in targeting specific areas commonly affected during menstrual cramps. Warm, easily digestible foods and the avoidance of cold and heavy foods might have contributed to reduced muscle spasms and improved blood flow, thereby alleviating pain.

### Nausea and Vomiting

The complete elimination of nausea and vomiting in participants suggests that *Ayurvedic* dietary modifications can effectively manage gastrointestinal symptoms associated with dysmenorrhea. The emphasis on lighter, easily digestible foods likely played a role in soothing the digestive system.

### Leg Cramps

Leg cramps can be caused by several factors; like reduced magnesium and potassium levels. Barley is proved to be a source of both.

The notable reduction in leg cramps further supports the overall effectiveness of the dietary changes. Improved circulation and reduced muscle tension might be the key factors contributing to this improvement.

### Probable mode of action

During menstrual period, it is crucial to ingest food that is easily digestible in order to promote a robust digestive fire (*Agni*). This dish promotes general health by stimulating the digestive tract. It is important to refrain from consuming meals that are *Ushna* (hot in potency), *Tikshna*, *Katu* (pungent), and *Lavana* (salty) as they can have a negative impact on one's health.

*Havishya*, a food source abundant in carbs and readily digested, enhances and enhances *Jatharagni* (the digestive process). Menstruating women frequently encounter gastrointestinal disturbances such as diarrhoea and constipation as a result of the release of prostaglandins and the effects of progesterone. This diet aids in the prevention of gastrointestinal problems, promoting overall well-being during menstruation.

During this period, there is a need for enhanced nutritional assistance as a result of blood loss and a decreased digestive fire (*Agni*). It is advisable to consume foods that are low in calories and may be easily digested in order to enhance *Agni* and uphold general well-being. Avoid consuming spicy, hot, pungent, or salty foods since they can worsen health conditions. *Sushruta* suggests consuming *Havishya Anna* during this phase, which consists of cooked *Yava* or *Shali* rice combined with milk and *Ghrita*. *Yava*, due to its astringent flavor, sweet aftertaste, and cooling effects, has the advantage of reducing excessive *Vata* and promoting digestion. *Acharya Vagbhatta* recommends the use of *Yaavaka*, a dish made from *Yava* (barley) and milk, as a way to improve digestion and purify the digestive tract during menstruation<sup>6</sup>. Furthermore, it is essential to consume foods that are abundant in prebiotics and probiotics during this period when the functioning of the gut microbiota is diminished. *Havishya Anna* promotes gut health, which is crucial for rebalancing the microbiome and improving the absorption of active estrogen by inhibiting  $\beta$ -glucuronidase. This helps maintain normal physiological processes after

menstruation.

## 7. CONCLUSION

The study emphasizes the efficacy of *Aharaj Rajaswalacharya* in the management of Primary dysmenorrhea, a prevalent menstruation condition that is worsened by stress and hormonal imbalances. Traditional *Ayurvedic* principles advocate ingesting readily digested foods like *Havishya* (consisting of *Shali* rice, *Ghee*, and milk) and *Yawaka* (made with barley and milk) to promote the enhancement of digestive fire (*Agni*) and the balance of *Vata*. These dietary approaches not only relieve menstruation discomfort, but also promote overall health may be by rebalancing the gut flora and providing the right nutritional components. These comprehensive dietary regimens are hopeful alternatives, offering relief from menstruation discomfort while also improving overall well-being.

**Consent:** Written consent taken from all participants

**Conflicts of Interest:** None declared.

**Financial Support:** Nil

**Author contributions -?**

## 8. ACKNOWLEDGEMENT ?

Declaration of use of any generative AI in writing ?.

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