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COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF *LEKHAN BASTI* AND *NASYA KARMA* WITH *DASHMOOLA TAILA* IN *ARTAVKSHAYA* W.S.R. TO PCOD

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Abstract-

Background:- Polycystic Ovarian Disease (PCOD) is one of the most common endocrine disorders affecting women of reproductive age and is frequently associated with menstrual irregularities, anovulation, infertility, and metabolic disturbances. In Ayurveda, the clinical manifestations of PCOD closely resemble *Artavakshaya*, which is characterized by delayed menstruation, scanty menstrual flow, and painful menstruation due to *Vata-Kapha Dosha* imbalance and *Artavavaha Srotodushti*. **Aim:-**To evaluate and compare the efficacy of *Lekhana Basti* and *Dashmoola Taila Nasya* in the management of *Artavakshaya* w.s.r. to PCOD.

Materials and Methods:-A randomized open-label comparative clinical study was conducted on 60 patients diagnosed with *Artavakshaya* w.s.r. to PCOD. Patients were randomly divided into two groups comprising 30 patients each. Group A received *Lekhana Basti* followed by *Dashmoola Taila Nasya*, whereas Group B received *Dashmoola Taila Nasya* alone. The duration of treatment was three months. Assessment was carried out on the basis of duration of menstrual bleeding, interval between menstrual cycles, quantity of menstrual bleeding, pain during menstruation, menstrual cycle pattern, and ovarian volume assessed by ultrasonography. **Results:-**Both groups showed statistically significant improvement in

clinical and objective parameters. In Group A, normal duration of bleeding was achieved in 53.33% patients, normal menstrual cycle interval in 63.33%, normal menstrual flow in 60%, pain-free menstruation in 66.66%, and regular menstrual cycles in 80% patients. In Group B, the corresponding improvements were 36.66%, 33.33%, 30%, 46.66%, and 60%, respectively. Mean ovarian volume decreased from 11.07 cm³ to 9.50 cm³ in Group A and from 11.26 cm³ to 10.48 cm³ in Group B. Overall therapeutic improvement was 61.99% in Group A and 39.33% in Group B. **Conclusion:-**Both *Lekhana Basti* and *Dashmoola Taila Nasya* were effective in the management of *Artavakshaya* w.s.r. to PCOD. However, *Lekhana Basti* combined with *Dashmoola Taila Nasya* demonstrated superior efficacy in improving menstrual parameters and reducing ovarian volume. The study suggests that this combined therapeutic approach may be a safe and effective Ayurvedic intervention for the management of PCOD.

Keywords: *Artavakshaya*, Polycystic Ovarian Disease, PCOD, *Lekhana Basti*, *Nasya Karma*, *Dashmoola Taila*, Panchakarma, Menstrual Disorders.

Introduction

Polycystic Ovarian Disease (PCOD) is one of the most common endocrine disorders affecting women of reproductive age and is characterized by menstrual irregularities, anovulation, hyperandrogenism, and polycystic ovarian morphology.¹ The prevalence of PCOD has increased considerably over recent decades due to sedentary lifestyle, unhealthy dietary habits, psychological stress, obesity, and environmental influences.² Besides reproductive dysfunction, PCOD is associated with long-term metabolic consequences including insulin resistance, type 2 diabetes mellitus, cardiovascular disorders, and infertility, thereby imposing a significant burden on women's health worldwide.³

In Ayurveda, menstrual health is considered an important indicator of female reproductive well-being. The condition resembling PCOD can be understood under the broad concept of *Artavakshaya*, which is characterized by delayed appearance of menstruation, scanty menstrual flow, and associated pain.⁴ *Sushruta* has described *Artavakshaya* as "*Yathochitakala Adarshanam, Alpata Va, Yonivedana Cha*," indicating delayed menstruation, reduced quantity of menstrual blood, and painful menstruation.⁵ The clinical manifestations of *Artavakshaya* show remarkable similarity with oligomenorrhea, hypomenorrhea, and anovulatory menstrual disorders commonly observed in PCOD.⁶

According to Ayurvedic principles, *Artava* is formed from properly nourished *Rasa* and *Rakta Dhatu* and is regulated primarily by *Apana Vata*.⁷ Vitiation of *Vata Dosha*, particularly *Apana Vata*, along with obstruction caused by aggravated *Kapha Dosha*, results in impaired functioning of *Artavavaha Srotas* and disturbance in normal menstrual physiology.⁸ The pathological process involves *Agnimandya*, *Ama* formation, *Srotorodha*, and *Kapha-Meda Dushti*, ultimately leading to inadequate formation and expulsion of *Artava*.⁹ This pathogenesis closely correlates with the hormonal imbalance, follicular arrest, and ovarian cyst formation observed in PCOD.¹⁰

Modern management of PCOD mainly focuses on hormonal regulation, ovulation induction, insulin sensitizers, and lifestyle modification.¹¹ Although these therapeutic measures may provide symptomatic relief, long-term treatment is often associated with recurrence, adverse effects, and variable patient compliance.¹² Consequently, there is an increasing need for safe, effective, and holistic treatment modalities that can address the underlying pathology and improve reproductive health in a sustainable manner.¹³

Among the various therapeutic procedures described in Ayurveda, *Basti Karma* is regarded as the most effective treatment for disorders involving *Vata Dosha*.¹⁴ *Lekhana Basti* possesses *Kapha-Meda Hara*, *Srotoshodhaka*, and *Agnivardhaka* properties, which help remove metabolic obstructions, normalize *Apana Vata*, and restore the physiological functioning of *Artavavaha Srotas*.¹⁵ By reducing excessive *Kapha* and *Meda* accumulation, *Lekhana Basti* may contribute to improved menstrual regularity and ovarian function.¹⁶

Similarly, *Nasya Karma* is an important therapeutic procedure acting through the nasal route, which is considered the gateway to the head (*Nasa Hi Shiraso Dvaram*).¹⁷ Administration of *Dashmoola Taila* through *Nasya* is believed to influence neuroendocrine regulation by acting on *Shringataka Marma* and related pathways.¹⁸ *Dashmoola* possesses *Tridosahara*, anti-inflammatory, analgesic, and rejuvenative properties, making it beneficial in disorders associated with *Vata-Kapha* predominance.¹⁹ Its therapeutic action may facilitate hormonal balance, reduce ovarian pathology, and improve menstrual function.²⁰

Considering the increasing prevalence of PCOD and the need for evidence-based Ayurvedic interventions, the present study was undertaken to evaluate and compare the efficacy of *Lekhana Basti* combined with *Dashmoola Taila Nasya* and *Dashmoola Taila Nasya* alone in the management of *Artavakshaya* with special reference to PCOD. The study aimed to assess their

effects on menstrual parameters, ovarian volume, and overall clinical outcomes, thereby contributing to the scientific validation of Panchakarma-based management strategies for PCOD.

Materials and Methods

Study Design

This randomized open-label comparative clinical trial evaluated the efficacy of *Lekhana Basti* and *Nasya Karma* with *Dashmoola Taila* in the management of *Artavakshaya* w.s.r. to Polycystic Ovarian Disease (PCOD), focusing on menstrual parameters and ovarian morphology.

Study Setting and Sample

Patients diagnosed with *Artavakshaya* w.s.r. to PCOD were recruited from the OPD and IPD of Jammu Institute of Ayurveda and Research, Jammu. A total of 60 patients were randomly divided into two groups of 30 each.

Diagnostic Criteria

Diagnosis was established on the basis of clinical features of *Artavakshaya* along with ultrasonographic evidence of polycystic ovaries. The diagnostic criteria included:

- Delayed or irregular menstruation.
- Scanty menstrual bleeding.
- Pain during menstruation.
- Ultrasonographic evidence of polycystic ovaries with increased ovarian volume.
- Features suggestive of hyperandrogenism wherever applicable.

Inclusion Criteria

- Female patients aged between 18 and 36 years.
- Married and unmarried women.
- Patients presenting with *Artavakshaya* and *Anartava* (amenorrhea up to 3 months).
- Ultrasonographic findings suggestive of PCOD.

Exclusion Criteria

- Patients suffering from menstrual disorders due to causes other than PCOD.
- Structural abnormalities of the uterus and adnexa.
- Severe systemic illnesses and major endocrine disorders.
- Patients presenting with menorrhagia or metrorrhagia.
- Patients requiring emergency gynecological intervention.

Grouping and Intervention

Group A (n = 30)

Patients in Group A were administered *Lekhana Basti* followed by *Nasya Karma* with *Dashmoola Taila*.

Lekhana Basti

The formulation consisted of *Makshika, Saindhava, Triphaladya Taila, Putoyavanyadi Kalka, Gomutra, Yavakshara, Shuddha Shilajatu, Kasisa, Hingu, and Tuttha*. *Lekhana Basti* was administered after completion of menstruation for seven days during two consecutive menstrual cycles.

Nasya Karma

Dashmoola Taila Nasya was administered in increasing dosage (6, 8, 10, 12, 14, 16, and 18 drops in each nostril) for seven consecutive days following *Basti Karma*.

Group B (n = 30)

Patients in Group B received only *Dashmoola Taila Nasya* in increasing dosage (6–18 drops in each nostril) for seven consecutive days during two consecutive menstrual cycles.

Both interventions were administered on an empty stomach. Patients were advised to follow barrier contraception during the treatment period.

Duration of Study and Follow-up

The total duration of treatment was three months. Follow-up assessment was carried out monthly to evaluate therapeutic response and disease progression.

Assessment Criteria

Therapeutic efficacy was assessed using both subjective and objective parameters.

Subjective Parameters

- Duration of menstrual bleeding.
- Interval between two menstrual cycles.
- Quantity of menstrual bleeding.
- Pain during menstruation.
- Pattern of menstrual cycle.

Objective Parameters

- Ultrasonographic assessment of ovarian volume.
- Serum testosterone levels.
- Ferriman–Gallwey score for hirsutism.
- Assessment of acne.

Laboratory Investigations

The following investigations were performed before and after treatment:

- Complete Blood Count (CBC).
- Erythrocyte Sedimentation Rate (ESR).
- Random Blood Sugar (RBS).
- Urine routine and microscopic examination.
- Pelvic ultrasonography.
- Serum testosterone estimation.
- Thyroid function tests.
- LH, FSH, estrogen, and progesterone levels whenever indicated.

Statistical Analysis

The collected data were analyzed using appropriate statistical methods. Intragroup and intergroup comparisons were performed using the Wilcoxon Signed Rank Test and Mann–Whitney U Test. A p-value less than 0.05 was considered statistically significant.

Table 1. Baseline Demographic Characteristics

Variable	Group A (n=30)	Group B (n=30)
Age 20–25 years	7 (23.33%)	5 (16.67%)
Age 26–30 years	13 (43.33%)	11 (36.67%)
Age 31–35 years	10 (33.33%)	14 (46.67%)
Married	13 (43.33%)	18 (60.00%)
Unmarried	17 (56.67%)	12 (40.00%)

Table 2. Effect on Menstrual Parameters

Parameter	Group A Improvement (%)	Group B Improvement (%)	p-value
Duration of bleeding	53.33	36.66	<0.0001
Cycle interval	63.33	33.33	<0.0001
Quantity of bleeding	60.00	30.00	<0.0001
Menstrual pain	66.66	46.66	<0.0001
Regular cycle	80.00	60.00	<0.0001

Table 3. Changes in Menstrual Cycle Pattern

Menstrual Pattern	Group A BT	Group A AT	Group B BT	Group B AT
Regular Cycle	5	24	3	18
Irregular Cycle	25	6	27	12

Table 4. Ultrasonographic Assessment

Parameter	Group A BT	Group A AT	Group B BT	Group B AT
Mean Ovarian Volume	11.07	9.50	11.26	10.48

Table 5. Overall Therapeutic Response

Group	Overall Improvement (%)
Group A (<i>Lekhana Basti + Nasya</i>)	61.99
Group B (<i>Nasya only</i>)	39.33

Discussion

The present study was conducted to evaluate the efficacy of *Lekhana Basti* combined with *Dashmoola Taila Nasya* and *Dashmoola Taila Nasya* alone in the management of *Artavakshaya* w.s.r. to PCOD. The results demonstrated statistically significant improvement in both groups; however, Group A showed comparatively superior outcomes in most of the clinical and objective parameters.

According to Ayurvedic principles, *Artavakshaya* results from vitiation of *Vata* and *Kapha Dosh*, leading to *Artavavaha Srotodushti*, impaired *Artava* formation, and menstrual irregularities. The clinical features of PCOD such as oligomenorrhea, hypomenorrhea, irregular cycles, and ovarian cyst formation closely resemble the manifestations of *Artavakshaya*. Therefore, therapies aimed at correcting *Vata-Kapha Dushti* and removing *Srotorodha* are expected to provide significant therapeutic benefits.

Significant improvement was observed in menstrual parameters including duration of bleeding, interval between cycles, quantity of menstrual flow, pain during menstruation, and cycle regularity. Group A demonstrated better improvement than Group B in all these parameters. The normalization of menstrual function may be attributed to correction of *Apana Vata*, removal of *Kapha*-induced obstruction, and restoration of normal functioning of *Artavavaha Srotas*. Improvement in menstrual flow and cycle regularity indicates enhanced reproductive function and better regulation of the menstrual process.

A significant reduction in ovarian volume was observed in both groups, with greater improvement in Group A. The mean ovarian volume decreased from 11.07 cm³ to 9.50 cm³ in Group A, whereas it reduced from 11.26 cm³ to 10.48 cm³ in Group B. This reduction suggests improvement in ovarian morphology and decreased cystic changes. The *Lekhana* and *Srotoshodhana* properties of *Lekhana Basti* may have contributed to the reduction of pathological *Kapha-Meda* accumulation associated with PCOD.

The superior efficacy of Group A may be explained by the multidimensional action of *Lekhana Basti*. As *Basti Karma* is considered the principal therapy for disorders involving *Vata Dosha*, it helps regulate *Apana Vata*, eliminate accumulated *Kapha* and *Meda*, improve metabolic activity, and restore normal reproductive physiology. In addition, *Dashmoola Taila Nasya* may exert its effect through neuroendocrine regulation, thereby supporting hormonal balance and menstrual health.

The overall therapeutic response was higher in Group A (61.99%) compared to Group B (39.33%), indicating that the combined administration of *Lekhana Basti* and *Dashmoola Taila Nasya* was more effective than *Dashmoola Taila Nasya* alone. The findings of the present study suggest that both therapies are beneficial in the management of *Artavakshaya* w.s.r. to PCOD; however, *Lekhana Basti* provides additional therapeutic advantages in improving menstrual parameters and reducing ovarian volume.

Limitations of the Study

The study was conducted on a relatively small sample size with a short follow-up period. Hormonal parameters could not be assessed in all participants. Further multicentric studies with larger sample sizes and longer follow-up are required to validate the findings.

Conclusion

The present study demonstrated that both *Lekhana Basti* combined with *Dashmoola Taila Nasya* and *Dashmoola Taila Nasya* alone were effective in the management of *Artavakshaya* w.s.r. to PCOD. Significant improvement was observed in menstrual parameters including duration of bleeding, interval between menstrual cycles, quantity of menstrual flow, pain during menstruation, and regularity of the menstrual cycle. A significant reduction in ovarian volume was also observed in both groups.

However, the therapeutic response was more pronounced in Group A, which received *Lekhana Basti* along with *Dashmoola Taila Nasya*. The combined therapy produced better improvement in menstrual regularity, menstrual flow, dysmenorrhea, and ovarian morphology when compared with *Dashmoola Taila Nasya* alone. The overall improvement was 61.99% in Group A and 39.33% in Group B.

The findings suggest that *Lekhana Basti* effectively addresses the underlying *Vata-Kapha* imbalance, *Srotorodha*, and *Kapha-Meda Dushti* associated with *Artavakshaya* and PCOD.

Therefore, *Lekhana Basti* in combination with *Dashmoola Taila Nasya* may be considered a safe, effective, and promising Ayurvedic therapeutic approach for the management of PCOD. Further studies with larger sample sizes and longer follow-up periods are recommended to validate these findings.

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