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Clinical Evaluation of the Efficacy of Basti Therapy Combined with Seed Cycle in the Management of Polycystic Ovarian Disease (PCOD)

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Abstract

Background: Polycystic Ovarian Disease (PCOD) is a common endocrine disorder affecting reproductive-aged women, characterized by menstrual irregularities, anovulation, and hormonal imbalances. Conventional treatments often provide symptomatic relief but may be associated with side effects and limited long-term efficacy. This case series explores the integrative role of Basti (a Panchakarma therapy) and Seed Cycling (a dietary approach to hormonal regulation) in the management of PCOD. Aim: To evaluate the effectiveness of a combined approach using Madhutailika Basti therapy and seed cycling in the management of PCOD. Methods: A total of 10 diagnosed PCOD patients, aged between 16-45 years, were selected for this case series. Each patient underwent Madhutailika Basti and a 3-month protocol of seed cycling involving the systematic consumption of flax, pumpkin, sesame, and sunflower seeds according to their menstrual cycle phases. Clinical assessment was done based on changes in menstrual regularity, ovarian morphology (via ultrasound), and associated symptoms such as acne, hirsutism, and weight gain. Results: Out of 10 patients, 8 showed significant improvement in menstrual regularity and reduction in PCOD-related symptoms. Ultrasound findings revealed normalization of ovarian morphology in 8 patients. Improvements in hormonal balance and overall well-being were also reported. No adverse effects were observed during or after treatment. Conclusion: The integrative approach of Basti and seed cycling demonstrated promising outcomes in the holistic management of PCOD. This combination may offer a safe and effective alternative or adjunct to conventional therapy.

Keywords: PCOD, Basti, Seed Cycle, Ayurveda, Menstrual health, Hormonal balance.

Introduction

Polycystic Ovarian Disease (PCOD), also referred to as Polycystic Ovary Syndrome (PCOS), is one of the most common endocrine disorders affecting women of reproductive age, with a prevalence estimated between 4% to 20% globally.[1] It is characterized by a constellation of symptoms including irregular menstrual cycles, hyperandrogenism, insulin resistance, and the presence of multiple cysts in the ovaries.[2] Conventional treatment approaches primarily focus on symptom management using hormonal therapies, insulin sensitizers, and lifestyle interventions; however, these often yield temporary relief and are associated with various side effects. In recent years, there has been a growing interest in integrative and holistic approaches to PCOD management, particularly those rooted in traditional systems of medicine. Ayurveda, the ancient Indian system of medicine, views PCOD as a manifestation of Kapha-Vata imbalance leading to Artava Dusti (menstrual and ovarian dysfunction).[5] Among the therapeutic modalities of Ayurveda, Basti (medicated enema) is considered a cornerstone treatment for Vata disorders and is often employed in the management of gynecological conditions, including PCOD.[7] Basti therapy is believed to correct systemic imbalances by directly delivering medicated formulations to the colon, thereby influencing hormonal regulation, metabolism, and reproductive function.Complementing this Ayurvedic approach, Seed Cycling is an emerging natural therapy that utilizes the hormonal modulating properties of specific seeds—such as flax, pumpkin, sunflower, and sesame—administered in a phased manner corresponding to the menstrual cycle.[9] The phytoestrogens, essential fatty acids, lignans, and micronutrients found in these seeds are thought to promote hormonal balance, improve ovulatory function, and support regular menstrual cycles. Despite the increasing anecdotal and clinical evidence supporting the use of Basti and Seed Cycling, there remains a lack of documented research evaluating their combined efficacy in PCOD management. This study presents a case series of 10 patients diagnosed with PCOD who underwent a combined treatment protocol involving Ayurvedic Basti therapy and Seed Cycling. The objective is to evaluate clinical outcomes related to menstrual regularity, hormonal parameters, ultrasound findings, and subjective symptom relief.

Aim and Objectives:

To evaluate the effectiveness of a combined approach using Madhutailika Basti therapy and seed cycling in the management of PCOD.

Materials and Methods:

Study Design:

A total of 10 female patients diagnosed with Polycystic Ovarian Disease (PCOD) were recruited from the outpatient department (OPD). This study was a randomised clinical study. All participants provided written informed consent after a detailed explanation of the study protocol.

Inclusion Criteria:

- Female patients between the age of 16 to 45 years, both married and unmarried.
- Diagnosed with PCOD based on the Rotterdam Criteria (at least two of the following: oligo/anovulation, clinical or biochemical signs of hyperandrogenism, and polycystic ovaries on ultrasonography).
- Irregular menstrual cycles (cycle >35 days or <21 days).
- At least one of the following symptoms: hirsutism, acne, obesity.

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Exclusion Criteria:

- Women younger than 16 years or older than 45 years.
- Known cases of thyroid dysfunction, hyperprolactinemia, diabetes mellitus, or adrenal disorders.
- Current use of oral contraceptives, hormonal therapy, or steroids.
- Pregnancy or lactation.
- Structural abnormalities of the uterus or ovaries.
- Unwillingness to follow the study protocol.

PATIENT INFORMATION AND CLINICAL FINDINGS:

The clinical presentation of all the cases are highlighted in Table 1.

Case 1: A 19 years old female patient visited PTSR OPD of the institute with complaints of scanty menstruation since 3 months and pain during menstruation and also associated complaints of acne over face and also hirsutism. She had done a USG on 04/05/2024 which shows uterus normal in shape and size but both ovaries show multiple peripherally placed immature follicles with stromal hypertrophy/PCOD.

Case 2: A 22 years old female patient from middle socio-economic background presented to OPD with complaints of irregular menstrual cycle since 7-8 months with associated complaint of obesity. She took allopathy treatment but got no relief. She also took hormonal pills for 3 months for that. She had done USG on 11/12/2024 which shows bilateral enlarged ovaries.

Case 3: A 25 years old female patient (married) visited PTSR OPD with complaints of irregular periods, facial hair growth since 2-3 yrs. She took modern treatment for 1.5yrs (hormonal pills). When she took hormonal pills, her cycle became regular but after that her cycle become again irregular. She had done her hormonal test and also had done a USG on 9/11/2024 which shows multiple follicles at peripheral location in bilateral ovaries.

Case 4: A 24 years old female patient from middle socio-economic status visited PTSR OPD with complaints of irregular menses and scanty menses since 4-5 months also associated complaints of hairfall and acne over face. She had done her hormonal investigations and USG on 15/06/2024 which shows Bilateral PCOD.

Case 5: A 25 years old female patient (married) visited PTSR OPD with complaints of irregular menstrual cycle, scanty menses, irritable behaviour, facial hair growth since 4 yrs. She took allopathic treatment for 3-4 months but got temporary relief. Her USG (28/08/2024) findings revealed bilateral poly cystic ovarian disease.

Case 6: A 21 years old female patient (married) came to PTSR OPD with complaints of irregular menstrual cycle since 3-4 yrs. She had also complained of weight gain and hair fall. Then her hormonal profile and USG (10/08/2024) showed poly cystic ovarian disease.

Case 7: A 24 yrs old female patient came to PTSR OPD with complaints of scanty menses since 3-4 months. She had also complained of pain lower abdomen during menses. Then her hormonal profile and USG (26/12/2024) revealed that both ovaries enlarged in size and show multiple small follicles in periphery.

Case 8: A 27 yrs old female patient (married) visited PTSR OPD with complaints of irregular menstrual cycle since 7 months. She had also complained of dyspareunia and pain in lower abdomen and white mucoidal discharge. Then her hormonal profile and USG (14/05/2024) was done. Which revealed both ovaries showed multiple follicles (PCOD).

Case 9: A 17 yrs old student came to PTSR OPD with complaints of irregular menses since 1 year and facial hair growth since 6 months. She had done USG (10/08/2024) which showed bilateral PCOD.

Case 10: A 23 yrs old student visited PTSR OPD with complaints of pain during menstruation since menarche with associated complaints of acne and hairfall since 1 year. Her USG (05/07/2025) report revealed borderline bulky bilateral ovaries in volume with polycystic echopattern.

Diagnostic Assessment:

At the time of enrollment, all patients underwent the following:

- Detailed history including menstrual patterns, lifestyle, and diet.
- Clinical examination including BMI, hirsutism score (Ferriman-Gallwey), acne.
- Transabdominal or transvaginal pelvic ultrasonography.
- Hormonal profile: LH, FSH, LH:FSH ratio, total testosterone, fasting insulin, fasting blood sugar, TSH, prolactin.

ASSESSMENT CRITERIA:

The results of the intervention are assessed using the following subjective and objective parameters in this case series. Assessment of subjective parameters was done at the end of each month of treatment whereas objective parameters were assessed on completion of treatment after 90 days.

A) Subjective parameters

Subjective Parameter	Grade 0	Grade 1	Grade 2	Grade 3
Reduction in weight	Reduced by >3kg	Reduced by 2-3 kg	Reduced in 1-2 kg	Reduced by 0-1 kg
Acne	No acne	Mainly bullae, abscesses, wide spread scaring	Comedoness, occasional papules mild	Predominent pustules, nodules, abscesses (severe)
Hirsutism	Normal area	Chin and upper lip	Complete face	Full body
Interval between menstrual cycles	21-35 days	36-39 days	40-45 days	>45 days
Duration of menstrual bleeding	4-7 days	3 days	2 days	1 day
Quantity of menstrual bleeding	>2 pads/day	2 pads/day	1 pad/day	Spotting
Pain during menses	No pain	Mild	Moderate	Severe

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B) Objective Parameters

jective Parameters	ade 0	ade 1	ade 2	ade 3
II	5-25 kg/m^2	30 kg/m^2	35 kg/m^2	5 kg/m^2
H/LH Ratio		-1:2	-1:3	or more
mber of Cyst	cyst			>10
arian volume	cm^3	2 cm^3	15 cm^3	5 cm^3
stosterone	50 ng/dl	70 ng/dl	150 ng/dl	50 ng/dl

THERAPEUTIC INTERVENTION

1. Basti therapy:

Patient was giving 3 sittings of Yog Basti

- Niruha Basti with decoctions of Madhutailaika Basti
- Anuvasana Basti with medicated oil (Sahacharadi Taila and Tila Taila)
- 8 days Yog Basti schedule per cycle for 3 consecutive cycles.

Order of Basti is as follow:

Day	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Type of Basti	A	A	N	A	N	A	N	A

A= Anuvasan basti with Sahacharadi tail and Tila taila

N= Niruha basti with Madhutailaika Basti

Preparation of Madhutailika Basti:[6]

S.NO.	Content of madhutailika basti	Matra
1.	Erandamool Kwath – 2 pala (96 ml)	2 pala (96 ml)
2.	Madhu- 1 pala (48 ml)	1 pala (48 ml)
3.	Tiltail – 1 pala (48 ml)	1 pala (48 ml)
4.	Satapushpa Kalka- ½ pala (24 ml)	½ pala (24 ml)
5.	Sandhava – ¼ pala (12 gm)	¼ pala (12 gm)

2. Seed Cycling:[9]

- **Follicular Phase (Day 1 to 14 of cycle):** 1 tablespoon flaxseed (rich in lignans and phytoestrogens) + 1 tablespoon pumpkin seeds (zinc-rich), taken daily in morning, mixed in warm water or added to food.
- **Luteal Phase (Day 15 to 28):** 1 tablespoon sunflower seeds (rich in selenium and vitamin E) + 1 tablespoon sesame seeds (phytoestrogens and healthy fats).

Continued for 3 cycles.

Outcome Measures:

Primary Outcomes:

- Regularity of menstrual cycles.
- Reduction in PCOD symptoms (acne, hirsutism, obesity).
- Improvement in ultrasonographic findings of ovaries.

Secondary Outcomes:

- Hormonal profile normalization (FSH, LH, Testosterone, LH:FSH ratio).
- Weight loss or BMI change.
- Patient-reported outcomes (mood, energy, sleep).

Follow-Up and Data Collection:

Patients were assessed at:

- Baseline (Day 0)
- Post-Basti Phase (Day 30^{th} ,60^{th} ,90^{th} day)
- After Seed Cycling Completion (Day 90)

Ultrasound and hormonal evaluations were repeated at the end of 3 months. All data were collected in standardized case record forms and entered into a secure digital database for analysis.

Observations & Results:

Demographic and Clinical Characteristics

Ten female patients aged between 16 to 45 years (mean age: 25.8 years) were included in the study. At baseline, all patients presented with oligomenorrhea (n=10), weight gain (n=7), acne (n=6), hirsutism (n=5), and signs of insulin resistance (n=4). Average BMI was 27.4 kg/m², suggesting a predominance of overweight individuals.

Menstrual Cycle Regulation

By the end of the treatment:

6 out of 10 patients (P1, P3, P5, P7, P9, P10) reported regular menstrual cycles (average cycle length: 28–32 days).

2 patients (P2, P6) had improvement in menstrual frequency (from every 50–60 days to every 35–38 days).

2 patients (P4, P8) had no significant change in menstrual regularity.

Ultrasound Findings:

Follow-up transabdominal pelvic ultrasounds after 3 months showed:

Complete resolution of cysts in 5 patients (P1, P3, P5, P7, P10).

Partial resolution in 3 patients (P2, P6, P9).

No significant changes in 2 patients (P4, P8).

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Hormonal Profile Changes
Hormonal assays showed:
Normalization of LH:FSH ratio in 6 patients (from >2:1 to <1.5:1).
Decrease in serum testosterone levels in 5 patients (P1, P3, P6, P7, P10).
Improved progesterone levels during luteal phase in 3 patients.
Mild decrease in fasting insulin in 4 patients with insulin resistance.

Secondary Observations
Weight loss: Mean reduction of 2.6 kg over 3 months (range: 0.8–6.0 kg)
Improvement in acne and hirsutism in 5 patients (P1, P3, P5, P7, P10)
Subjective improvements: 8 patients reported better mood, reduced fatigue, and improved sleep patterns.

Discussion:
This case series evaluated the integrative approach of Basti and seed cycling in the management of PCOD and revealed promising outcomes in terms of menstrual regulation, hormonal correction, and ultrasonographic changes.

Mode of action of Basti
In Ayurveda, Basti is considered the prime treatment for Vata Vyadhi. PCOD, especially when characterized by irregular menstruation and cystic ovarian structures, is often associated with Apana Vata imbalance. Anuvasana Basti nourished reproductive tissues (Artavavaha Srotas), helping restore cyclical ovulation. Niruha Basti eliminated accumulated Ama and regulated Vata and Kapha, supporting detoxification and hormonal normalization. The use of Shatapushpa, Dashamoola, and Eranda addressed uterine congestion and supported follicular development. Similar improvements in ovulation and hormonal balance after Basti therapy have been reported in previous studies on PCOD. Basti normalizes the Apana Vata through both local and systemic effect as anal area is considered as root of body and site of Apana Vata is lower part of the body.[6] Honey having Yogavahi property, increases potency of Basti. Saindhava by molecular, quick and smooth properties, reaches up to micro channels, breaks down morbid mala and liquefies Dosha. Sesamee oil with smooth, heavy properties pacifics dry, rough properties of vata and increases permeability of cell membrane. Shatapushpa and Eranda Moola add appetizing, uterine purification, restoration of health property to this. By virtues of all these, Madhutailika Basti helps in amapachana and Vata Kapha Shamana which leads removal of blockage from channels thus maintaining proper functioning of Vayu resulting in regulation of Ovarian function and finally ovulation.

According to modern science
1. Madhutailika Basti through rectum reaches instantly into systemic circulation thus has faster absorption and quick results.
2. Enteric and nervous system controls the motility, exocrine and endocrine secretions and microcirculation of the G.I. tract. ENS (Enteric Nervous System) closely resembles the CNS (Central Nervous System).
3. Endogenous opioids are mainly present in G.I. tract and in brain (hypothalamus, pituitary). Beta endorptin has a role in regulation of normal menstrual cycle.
Ovarian cycle is regulated through the Feedback of hormones on the neural tissue of CNS. The regulation of ovarian function occurs through Hypothalamic-Pituitary-Ovarian axis by autocrine, paracine and endocrine mechanism. Hypothalamus & Pituitary is under control of CNS. Ovaries are under control Parasympathetic. Intestine is richly supplied with nerves.
Madhutailika Basti enters into G.I. tract which is considered as enteric nervous system. The essence of Basti dravya stimulates. Endogenous opioids which are usually present in G.I. tract. These endogenous opioids may influence GnRH release and aids to regulate HPO axis and thus regulate the ovarian cycle. Basti stimulates the ENS generate the stimulatory signal for CNS causes stimulation of Hypothalamus for GnRH and the pituitary for FSH and LH with the help of neurotransmitters.

Role of Seed Cycling:
Modern Perspective: Seed cycling is the practice of consuming specific seeds during different phases of the menstrual cycle to support hormone balance.
Follicular Phase (Day 1–14): Flax + Pumpkin Seeds
Flax seeds: Rich in lignans (phytoestrogens) which help modulate estrogen levels—preventing estrogen dominance (common in PCOD).[8]
Pumpkin seeds: High in zinc, supporting progesterone synthesis and healthy follicle maturation.
Luteal Phase (Day 15–28): Sunflower + Sesame Seeds
Sesame seeds: Rich in lignans and essential fatty acids; they help reduce excess estrogen and support progesterone production.
Sunflower seeds: Contain selenium, an antioxidant that supports liver detoxification of hormones and protects ovarian tissue.

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Overall Actions in PCOD:

1. Hormonal Balance: Restores estrogen-progesterone rhythm.
2. Insulin Sensitivity: Seeds provide fibre, lignans, and omega-3 fatty acids that improve insulin response, reducing hyperinsulinemia linked to PCOD.
3. Anti-inflammatory Effect: Seeds are rich in antioxidants, reducing ovarian and systemic inflammation.
4. Cycle Regulation: Supports ovulation and reduces anovulatory cycles.
5. Weight & Metabolic Support: Healthy fats and fibres regulate appetite and weight—crucial in PCOD management.

Ayurvedic Perspective:

Though seed cycling is a modern concept, its mode of action can be interpreted through Ayurvedic principles:

1. Beeja-poshana (Ovarian nourishment): Seeds are potent sources of Ojas-vardhaka dravyas, directly nourishing Beeja granthi (ovaries) and supporting Ārtava dhātu utpatti (ovum formation).

2. Vāta-Kapha Shamana: PCOD is a Kapha-Meda pradhāna vyadhi with Vāta avarana. Seeds with Snigdha and Laghu guna (like flax, sesame) correct Kapha-Meda dushti, while zinc and selenium-rich seeds balance Apāna Vāta for proper ovulation.

3. Rasa & Rakta Dhātu Poshana: Seeds are rich in micronutrients, acting as Rasāyana and ensuring proper Rasa-Rakta dhātu paripāka, thereby restoring menstrual regularity.

4. Agni Deepana & Srotoshodhana: The fatty acids and fibre improve Jatharāgni and prevent Āma utpatti, reducing srotorodha (channel obstruction) which is the key pathology in PCOD.

Seed cycling offered nutritional and hormonal support post-Basti. The targeted use of seeds provided: Phytoestrogens from flax and sesame, which helped modulate estrogen in the follicular and luteal phases.[9] Zinc and selenium from pumpkin and sunflower, which supported ovulation and progesterone production. The cyclic intake of seeds mimicked hormonal rhythms, likely helping reestablish a natural menstrual cycle. This nutritional intervention was particularly effective in patients with mild-to-moderate insulin resistance, possibly due to the insulin-sensitizing effects of flax and sesame lignans.[12]

Conclusion

The findings of this case series suggest that the integrative application of **Madhutailika Basti** and **Seed Cycling** may offer a promising and holistic approach in the management of **Polycystic Ovarian Disease (PCOD)**. Basti created a physiological environment conducive to hormonal reset, while seed cycling reinforced the desired hormonal phase shifts in the menstrual cycle. The majority of participants demonstrated notable improvements in **menstrual regularity**, **ultrasonographic ovarian morphology**, and **hormonal parameters**, along with a reduction in clinical symptoms such as **acne, hirsutism, and weight gain**. The intervention was well-tolerated, with no reported adverse effects, indicating its potential safety and acceptability. These outcomes underscore the relevance of combining **Ayurvedic Panchakarma therapies** with **dietary interventions** rooted in modern nutritional principles. However, given the limited sample size and absence of a control group, these results should be interpreted with caution. Further **randomized controlled trials** with larger cohorts and long-term follow-up are warranted to substantiate these preliminary observations and elucidate the underlying mechanisms of action.

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