

Effect of Panchakarma and Pathya-Apathya in the Management of PCOS: A Comprehensive Review

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Abstract—Polycystic Ovary Syndrome (PCOS) is a multifactorial endocrine and metabolic disorder characterized by anovulation, hyperandrogenism, polycystic ovaries, and significant metabolic disturbances such as insulin resistance and dyslipidemia. Its prevalence is increasing globally, particularly among reproductive-aged women, and it is considered one of the leading causes of infertility and menstrual dysfunction. Conventional management primarily focuses on symptomatic relief through hormonal therapy and insulin-sensitizing agents; however, many patients experience incomplete improvement, adverse effects, or recurrence upon cessation of medications. Ayurveda offers a holistic and individualized framework for understanding PCOS through the concepts of Kapha-Vata imbalance, Medo-Dushti, Ama accumulation, and obstruction of Artavavaha Srotas. Panchakarma therapies including Vamana, Virechana, Basti, and Uttara-Basti aim to cleanse the body, correct doshic imbalance, restore metabolic harmony, and regulate reproductive physiology. Pathya-Apathya (diet and lifestyle regimen) plays a crucial role in maintaining metabolic balance, improving insulin sensitivity, and preventing recurrence of symptoms. This comprehensive review integrates classical Ayurvedic theory, contemporary clinical evidence, and therapeutic rationale to evaluate the effectiveness of Panchakarma and Pathya-Apathya in the management of PCOS. Findings indicate significant improvements in menstrual regularity, ovulatory function, BMI, insulin resistance, acne, hirsutism, and psychological well-being when Panchakarma is combined with appropriate dietary and lifestyle modifications. The synergistic action of detoxification, metabolic resetting, and sustainable lifestyle change makes this integrative approach particularly beneficial. The review highlights the need

for standardized Panchakarma protocols and large-scale randomized studies to further validate these outcomes.

I. INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age, with an estimated prevalence ranging from 6% to 20% depending on diagnostic criteria. It manifests as a heterogeneous condition involving reproductive, metabolic, and psychological components. Current understanding attributes PCOS to a complex interplay of genetic predisposition, insulin resistance, hyperandrogenism, adiposity, and chronic low-grade inflammation. These interconnected factors contribute to menstrual irregularities, anovulation, ovarian follicular arrest, metabolic syndrome, and long-term risks such as type 2 diabetes and cardiovascular disease. Despite advances in modern therapeutic strategies, long-term outcomes remain suboptimal due to limited effectiveness in addressing root causes, medication intolerance, and recurrence of symptoms. 1

Ayurveda provides a more holistic and systemic perspective on PCOS by relating its clinical features to various pathological entities such as Artava Dushti, Beeja Dushti, Sthoulya, Avarana of Vata, and disturbances of Kapha, Medas, and Agni. Classical descriptions of menstrual disorders (Artava-Vyapad), ovarian dysfunction, and metabolic imbalance parallel the modern clinical presentations of PCOS. From an Ayurvedic viewpoint, improper diet, sedentary habits, stress, and suppression of natural urges contribute to

Kapha aggravation, Medo-Dushti, and the formation of Ama, which collectively block the channels responsible for ovarian function and hormonal balance. Over time, Vata becomes obstructed, leading to anovulation and menstrual irregularities. 2

Panchakarma, the cornerstone of Ayurvedic detoxification and rejuvenation therapy, offers an effective therapeutic pathway by addressing both metabolic and reproductive dysfunctions. Procedures such as Vamana (therapeutic emesis), Virechana (purgation), Basti (medicated enema), and Uttara-Basti help eliminate vitiated doshas, clear srotas (channels), regulate Agni, and restore hormonal and ovarian balance. These therapies not only provide symptomatic relief but also target the underlying causes of PCOS. In addition, Pathya-Apathya including diet, lifestyle, behavioral modifications, yoga, and stress management is essential for sustaining the therapeutic effects and preventing recurrence. 3

Growing clinical evidence suggests that integrative Ayurvedic management, combining Panchakarma with lifestyle interventions, significantly improves metabolic parameters, ovulation, menstrual cyclicity, and overall quality of life. However, systematic evaluation of these therapies remains limited. Therefore, this review aims to consolidate classical knowledge and contemporary research to provide a comprehensive understanding of the role of Panchakarma and Pathya-Apathya in PCOS management and to identify areas requiring further scientific validation.4

II. AIMS AND OBJECTIVES

Aim

To comprehensively review the therapeutic role of Panchakarma and Pathya-Apathya in the management of Polycystic Ovary Syndrome (PCOS) through classical Ayurvedic principles and contemporary clinical evidence.

Objectives

- To analyze the Ayurvedic pathophysiology of PCOS based on classical texts and modern interpretations.
- To evaluate the role of specific Panchakarma therapies such as Vamana, Virechana, Basti, and Uttara-Basti in correcting dosha imbalance and improving reproductive function.

- To examine the effectiveness of Pathya-Apathya (diet and lifestyle modifications) in long-term PCOS management.
- To review available clinical studies, case reports, and observational data on Panchakarma outcomes in PCOS.
- To identify gaps in current evidence and propose directions for future research.

III. MATERIALS AND METHODS

Study Design

A narrative review approach was adopted to compile and synthesize information related to Ayurvedic management of PCOS through Panchakarma and Pathya-Apathya.

Sources of Data

The following sources were included:

- Classical Ayurvedic texts: Charaka Samhita, Ashtanga Hridaya, Sushruta Samhita, and commentaries.
- Ayurvedic clinical practice guidelines related to Artava Vikara, Yonivyapad, Sthoulya, and Avarana.
- Peer-reviewed journal articles from databases such as PubMed, Google Scholar, AYUSH Research Portal, DHARA, and ResearchGate.
- Randomized controlled trials, observational studies, case series, and single-case reports on PCOS with Panchakarma interventions.

IV. AYURVEDIC UNDERSTANDING OF PCOS

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1. Nidana (Etiology)

- Excessive consumption of Kapha-Medo aggravating foods
- Sedentary lifestyle
- Stress, emotional disturbances
- Suppression of natural urges
- Environmental and hormonal disturbances

2. Samprapti (Pathogenesis)

- Vitiation of Kapha → Medo-Dushti → obstruction of Artavavaha Srotas
- Aggravation of Vata → anovulation, follicular arrest
- Accumulation of Ama → chronic inflammation
- Pitta imbalance → hormonal instability

3. Lakshana (Clinical Features)

- Irregular menstrual cycles
- Oligo/anovulation
- Hirsutism, acne
- Weight gain, insulin resistance
- Subfertility
- Mood disturbances

V. ROLE OF PANCHAKARMA IN PCOS MANAGEMENT 8,9

1. Deepana-Pachana

Purpose: Improve Agni, reduce Ama.

Drugs: Trikatu, Hingvastaka, Chitrakadi Vati.

Effect: Enhances metabolism, prepares patient for Shodhana.

2. Snehana (Internal & External Oleation)

Use: Tila Taila, Murchita Ghrita, Medohara Ghee.

Benefits: Mobilizes doshas from peripheral tissues, improves circulation, softens channels (Srotoshodhana).

3. Swedana (Sudation Therapy)

Methods: Bashpa Sweda, Ksheera Dhara, Valuka Sweda

Effect: Reduces Kapha and Medas, improves insulin sensitivity, relieves ovarian congestion.

4. Vamana (Therapeutic Emesis)

Indication: Kapha-Medo Pradhana PCOS with obesity.

Effect:

- Reduces insulin resistance
- Clears Kapha obstruction in Artavavaha Srotas
- Improves ovulation
- Restores metabolic balance

5. Virechana (Purgation Therapy)

Indication: Pitta, Kapha involvement; hormonal and metabolic imbalance.

Drugs: Trivrit Leha, Eranda Taila, Avipattikar Churna.

Effect:

- Regulates the hypothalamic–pituitary–ovarian axis
- Reduces inflammation
- Improves menstrual regularity
- Supports liver detoxification (important for hormone metabolism)

6. Basti Therapy

Most crucial Panchakarma for PCOS (Vata-Anulomana).

a. Niruha Basti (Decoction Enema)

Formulations: Dashamoola, Punarnava, Triphala, Gokshura.

Effect:

- Clears Avarana of Vata
- Restores ovarian function
- Reduces abdominal heaviness and bloating

b. Anuvasana Basti (Oil Enema)

Formulations: Ksheerabala, Narayana Taila, Yashtimadhu Taila.

Effect:

- Nourishes reproductive tissues
- Regulates menstrual cycles
- Enhances fertility

7. Uttara-Basti

Indicated in chronic anovulation and endometrial receptivity issues.

Outcomes:

- Improves follicular maturation
- Enhances cervical and uterine health
- Clears subtle srotas obstruction

8. Nasya

Useful in stress-related hormonal imbalance.

VI. PATHYA-APATHYA IN PCOS 10,11

1. Pathya (Recommended Diet & Lifestyle)

Dietary Guidelines

- Light, Kapha-reducing diet
- Whole grains: barley, millets
- Low glycemic foods
- Warm water, herbal teas
- Bitter vegetables: neem, methi, karela
- Spices: turmeric, cinnamon, black pepper

Lifestyle

- Daily exercise (45 minutes)
- Yoga: Surya Namaskar, Trikonasana, Baddha Konasana
- Pranayama: Anulom Vilom, Bhramari, Kapalbhathi
- Stress management, good sleep hygiene

2. Apathya (To be Avoided)

- Cold, heavy, oily foods
- Refined sugar, bakery items
- Dairy excess
- Daytime sleeping
- Sedentary lifestyle
- High stress and emotional suppression

VII. DISCUSSION

PCOS is a multifaceted disorder that presents with reproductive, metabolic, and psychological disturbances, making its management challenging through single-modality interventions. Conventional treatments such as oral contraceptives, insulin sensitizers, and anti-androgens target specific symptoms, yet they do not address the root causes of insulin resistance, metabolic dysfunction, and hormonal imbalance. In contrast, Ayurveda views PCOS as a systemic disease arising from Kapha accumulation, Medo-Dushti, impaired Agni, Ama formation, and obstruction of Artavavaha Srotas a perspective that provides a more integrative understanding of disease progression. 12

The findings of this review demonstrate that Panchakarma therapies offer a unique approach that targets both immediate symptoms and underlying pathophysiology. Deepana-Pachana enhances digestive and metabolic fire, thereby preparing the body for effective detoxification. Snehana and Swedana mobilize stored toxins and vitiated doshas, promoting systemic circulation and lymphatic drainage critical for hormonal regulation. Vamana and Virechana, by eliminating Kapha and Pitta doshas, help correct metabolic imbalances, reduce insulin resistance, and restore hepatic and endocrine functions. 13

Among all Panchakarma interventions, Basti emerges as a core therapy due to its ability to regulate Vata, the primary dosha responsible for reproductive physiology, ovulation, and menstrual regulation. Clinical observations suggest that Basti therapy improves follicular development, endometrial receptivity, and menstrual cyclicity. Uttara-Basti, though specialized, has shown significant benefits in chronic anovulation, ovarian dysfunction, and subfertility, making it highly relevant for women with PCOS presenting with infertility. 14

A significant aspect emerging from this review is the synergistic effect of combining Panchakarma with Pathya-Apathya. Therapeutic procedures may correct doshic imbalance temporarily, but long-term benefits depend heavily on sustained dietary and lifestyle adherence. The Pathya regimen focused on Kapha-reducing foods, low-glycemic intake, and regular physical activity helps maintain optimal metabolic function, prevent weight gain, and improve insulin sensitivity. Yoga and pranayama complement the treatment by modulating stress response, reducing cortisol levels, and improving autonomic balance, all of which are known contributors to PCOS severity. 15 Another noteworthy finding is the psychological dimension of PCOS management. Women with PCOS frequently experience anxiety, depression, body-image disturbances, and stress, which can exacerbate hormonal dysfunction. Panchakarma, particularly through its detoxifying and revitalizing actions, has been associated with improved mental well-being, enhanced sleep quality, and reduced stress markers. This integrative impact positions Ayurveda as an ideal holistic system for addressing the psychosomatic nature of PCOS. 16

Despite promising outcomes, this review identifies several limitations in the current evidence base. Many clinical studies have small sample sizes, lack randomization, and do not use standardized Panchakarma protocols. Variations in formulations, treatment durations, and follow-up periods make it difficult to generalize findings. Additionally, modern biomarkers such as AMH (Anti-Müllerian Hormone), inflammatory markers, and metabolic profiling are not uniformly assessed in Ayurvedic studies. There is a pressing need for larger, well-designed randomized controlled trials to validate these therapies, compare them with standard treatments, and explore mechanistic pathways more rigorously. 17

VIII. CONCLUSION

The present review highlights the substantial therapeutic potential of Panchakarma and Pathya-Apathya in the holistic management of PCOS. By integrating detoxification, metabolic correction, hormonal regulation, and lifestyle optimization, Ayurveda offers a comprehensive approach that addresses both the manifestations and root causes of PCOS. Panchakarma therapies such as Vamana,

Virechana, Basti, and Uttara-Basti provide targeted benefits by eliminating vitiated doshas, clearing obstructed channels, restoring Agni, and improving reproductive capacity. When reinforced with dietary and lifestyle modifications, these therapies promote long-term metabolic stability, enhance insulin sensitivity, regulate menstruation, and support emotional well-being. The combined approach not only alleviates primary symptoms such as irregular cycles, anovulation, acne, hirsutism, and weight gain but also reduces future risk factors related to diabetes, cardiovascular disease, and metabolic syndrome. The psychological benefits of Ayurvedic management further enhance treatment compliance and quality of life, making it a sustainable and patient-friendly modality. However, despite encouraging results, the need for evidence-based standardization remains. Future studies should focus on robust clinical trials, clear diagnostic criteria, standardized treatment protocols, and objective biochemical markers to establish strong scientific validation. Integrating Ayurveda with modern diagnostic tools may open new avenues for personalized, effective, and holistic PCOS care. In conclusion, Panchakarma and Pathya-Apathya represent an effective, holistic, and sustainable therapeutic strategy for PCOS management. Their multidimensional impact positions Ayurveda as a valuable complementary or alternative approach that can significantly improve reproductive health, metabolic balance, and overall well-being in women with PCOS.

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