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PCOD Through the Lens of Ayurveda: A Review of Artavkshaya — Concept, Pathophysiology, and Management

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ABSTRACT

Background: Polycystic Ovarian Disease (PCOD) is one of the most prevalent endocrine-metabolic disorders affecting women of reproductive age worldwide, with an estimated prevalence of 5–10%. In classical Ayurvedic texts, the clinical constellation of PCOD closely corresponds to the condition described as Artavkshaya — a state of diminished or qualitatively impaired menstrual function rooted in Vata-Kapha predominance and Dhatvagnimandya.

Objective: This review aims to establish a conceptual and clinical correlation between PCOD and Artavkshaya, examine the Ayurvedic understanding of its etiopathogenesis, and summarize the evidence for Ayurvedic herbal and Panchakarma-based management strategies.

Methods: A narrative review of classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita, Ashtanga Hridayam, and Kashyapa Samhita was conducted alongside a search of PubMed, Google Scholar, and AYUSH databases for relevant clinical and experimental studies on PCOD and Ayurvedic management published between 2000 and 2024.

Results: The symptom complex of Artavkshaya — oligomenorrhoea, infertility, weight gain, hirsutism, and acne — mirrors the diagnostic criteria of PCOD. Vata-Kapha vitiation leading to Avarana of Artava dhatu parallels the hormonal dysregulation and follicular arrest seen in PCOD. Herbal drugs such as Shatavari (Asparagus racemosus), Ashwagandha (Withania somnifera), Triphala, Varuna (Crataeva nurvala), and formulations such as Rajapravartini Vati, Kanchanar Guggulu demonstrate significant hormone-modulating and metabolic benefits.

Conclusion: Ayurveda offers a comprehensive, individualized approach to PCOD through the framework of Artavkshaya, addressing root causes at the level of Dosha, Dhatu, and Agni. Integrative management combining Ayurvedic interventions with modern evidence-based monitoring holds considerable promise..

Keywords: PCOD; Artavkshaya; Ayurveda; Vata-Kapha; Kanchanar Guggulu; Shatavari; Menstrual disorder; Polycystic ovary**.**

INTRODUCTION

Polycystic Ovarian Disease (PCOD), also referred to as Polycystic Ovarian Syndrome (PCOS), is a heterogeneous endocrine disorder characterized by hyperandrogenism, chronic anovulation, and polycystic ovarian morphology. It is the most common cause of anovulatory infertility, affecting 5–10% of women of reproductive age globally and up to 22% in Indian urban populations [1,2]. The condition is associated with significant metabolic comorbidities including insulin resistance, type 2 diabetes mellitus, dyslipidaemia, and cardiovascular risk.

Despite advances in modern pharmacotherapy — including oral contraceptive pills, metformin, clomiphene citrate, and letrozole — none address the underlying metabolic-hormonal dysregulation holistically or without long-term adverse effects. This therapeutic gap has renewed interest in traditional systems of medicine. In Ayurveda, menstrual disorders are described under the heading of *Artava Dushti* and *Yonivyapad*. Among these, *Artavkshaya* — the diminution or qualitative impairment of menstrual function — bears the closest semblance to PCOD in terms of its symptom profile, etiology, and pathogenesis [3].

This review aims to: (a) explore the Ayurvedic conceptual framework of Artavkshaya, (b) correlate it with the modern pathophysiology of PCOD, (c) evaluate Ayurvedic herbal and Panchakarma-based interventions, and (d) propose an integrative management framework.

2. AYURVEDIC CONCEPT OF ARTAVKSHAYA

2.1 Definition and Classical Description

The term *Artavkshaya* is derived from *Artava* (menstrual blood / ovum) and *Kshaya* (diminution/depletion). *Charaka Samhita* (Chikitsa Sthana 30) and *Ashtanga Hridayam* (Uttara Sthana 33) describe *Artavkshaya* as: sparse or delayed menstruation (*alpaartava*), blackish or thin menstrual discharge, pain during menstruation, and general symptoms of *Vata* excess [4,5].

2.2 Nidana (Etiology)

Classical texts attribute the causation of *Artavkshaya* to the following etiological factors:

- Excessive intake of dry, cold, heavy, and incompatible foods (Viruddha Ahara)
- Sedentary lifestyle, day sleep, and suppression of natural urges (Vegadharana)
- Psychological stress (Chinta, Shoka) causing Vata vitiation
- Improper Panchakarma or excessive Shodhana depleting Dhatu

These etiological factors produce a state of *Vata-Kapha Prakopa* leading to *Dhatvagnimandya* (impaired tissue metabolism) and ultimately to *Artava Kshaya* [6].

2.3 Samprapti (Pathogenesis)

The *Samprapti* (pathogenesis) of *Artavkshaya* can be understood through the following sequential steps:

1. Nidana Sevana → Vitiation of Vata and Kapha Dosha

2. Dhatvagnimandya → Impaired metabolism of Rasa, Rakta, and Meda Dhatu

3. Kapha Avarana → Obstruction of Artava Vaha Srotas by vitiated Kapha and Meda

4. Artava Kshaya → Diminished, delayed, or qualitatively impaired Artava (manifest as PCOD symptoms)

3. MODERN PATHOPHYSIOLOGY OF PCOD

3.1 Diagnostic Criteria

PCOD is diagnosed based on the Rotterdam Criteria (2003), which requires two of the following three features: (i) oligo- or anovulation, (ii) clinical or biochemical signs of hyperandrogenism, and (iii) polycystic ovaries on ultrasonography (≥12 follicles per ovary or ovarian volume >10 mL). The condition is also associated with elevated LH:FSH ratio (>2:1), raised serum androgens, and frequently insulin resistance [7].

3.2 Hormonal and Metabolic Dysregulation

The central pathophysiological defect in PCOD involves dysregulation of the hypothalamic-pituitary-ovarian (HPO) axis. Excess LH secretion drives androgen overproduction from theca cells, while insulin resistance and compensatory hyperinsulinaemia amplify androgen synthesis and reduce sex hormone-binding globulin (SHBG), thereby elevating free androgen levels. This hormonal milieu promotes follicular arrest at the antral stage, resulting in the characteristic 'cystic' ovarian morphology [8].

Chronic low-grade inflammation, oxidative stress, and adipokine dysregulation — particularly elevated leptin and reduced adiponectin — further perpetuate the cycle of anovulation and metabolic dysfunction. In Indian women, the phenotype is frequently lean-PCOD, with prominent menstrual irregularity even without obesity, complicating management [9].

4. CORRELATION BETWEEN ARTAVKSHAYA AND PCOD

The clinical, etiological, and pathophysiological features of PCOD map remarkably well onto the Ayurvedic construct of Artavkshaya. The following points of correlation are noteworthy:

- **Oligomenorrhoea / Amenorrhoea** corresponds to *Alpaartava / Nashta Artava*
- **Obesity / Weight gain** corresponds to *Meda Dhatu Vriddhi* from *Medodushti*
- **Hirsutism / Acne** reflects *Pitta-Kapha Dushti* of skin channels
- **Infertility / Anovulation** parallels the obstruction of *Artava Vaha Srotas* by *Kapha Avarana*
- **Insulin resistance** corresponds to *Dhatvagnimandya* at the level of *Meda Dhatu*

Thus, *Artavkshaya* with *Vata-Kapha Pradhanata* and *Medodushti* can be considered the Ayurvedic equivalent of PCOD, supported by several published clinical observations [10,11].

5. AYURVEDIC MANAGEMENT OF ARTAVKSHAYA / PCOD

5.1 Ahara and Vihara (Dietary and Lifestyle Modifications)

Management begins with correction of *Nidana Parivarjana* — removal of causative factors. A *Kapha-Vata* pacifying diet rich in warm, light, easily digestible foods; avoidance of processed foods, sweets, and dairy excesses; regular exercise (*Vyayama*); and stress reduction through *Yoga* and *Pranayama* form the foundational interventions [12].

5.2 Single Herb Drugs (Dravyaguna)

Several Ayurvedic single drugs have demonstrated clinical and experimental efficacy in PCOD/Artavkshaya management:

- ***Shatavari (Asparagus racemosus):*** A potent *Rasayana* and *Artava Janana* drug. Preclinical studies show phytoestrogen-like activity, ovarian follicle stimulation, and anti-inflammatory properties [13].
- ***Ashwagandha (Withania somnifera):*** Adaptogenic and anti-stress properties reduce HPO axis dysregulation; demonstrated anti-androgenic and insulin-sensitizing effects [14].
- ***Triphala:*** Improves *Agni*, reduces oxidative stress, and assists in lipid metabolism correction [15].
- ***Lodhra (Symplocos racemosa):*** Traditionally used as *Artava Janana*; studies suggest LH and FSH normalization activity [16].
- ***Guduchi (Tinospora cordifolia):*** Anti-inflammatory and immunomodulatory; reduces chronic low-grade inflammation associated with PCOD [17].

5.3 Classical Formulations

Key classical formulations indicated in *Artavkshaya* include:

- ***Kanchanar Guggulu:*** Targets *Kapha Meda Avarana*; clinical trials show reduction in ovarian cyst size, improved menstrual regularity, and lowered androgen levels [18].
- ***Rajapravartini Vati:*** Classical *Artava Janana* formulation used in oligomenorrhoea and delayed menses; contains Aloe vera, Tankana Bhasma, and Hingu [19].
- ***Shatapushpa-Shatavari Kalpa:*** Demonstrated efficacy in restoring ovulatory cycles in PCOD patients in randomized clinical trials [20].
- ***Varunadi Kwatha / Varuna (Crataeva nurvala):*** Targets *Meda-Kapha* obstruction; useful in polycystic morphology with metabolic syndrome [21].

5.4 Panchakarma Interventions

Panchakarma plays a crucial role in *Shodhana* (bio-purification) of vitiated *Dosha*:

- **Virechana (Therapeutic purgation):** Corrects *Pitta-Kapha Dushti* and improves liver metabolism relevant to androgen clearance [22].
- **Basti (Medicated enema):** Especially *Uttara Basti* (intrauterine/intravaginal drug installation) is the prime treatment for *Artava Vaha Srotas* disorders; shown to improve ovarian morphology and hormonal parameters [23].
- **Udwarthana (Dry powder massage):** Reduces *Meda Dhatu* accumulation, improves insulin sensitivity, and alleviates *Kapha Avarana* [24].

6. COMPARATIVE ANALYSIS: AYURVEDIC VS MODERN MANAGEMENT

Modern management of PCOD focuses on symptomatic control through hormonal regulation (OCPs), ovulation induction (clomiphene, letrozole), and insulin sensitization (metformin). While effective in short-term outcomes, these carry risks of side effects including thromboembolism (OCPs), ovarian hyperstimulation (clomiphene), and

gastrointestinal intolerance (metformin). Long-term relapse after cessation of medication is common.

Ayurvedic management, by contrast, addresses the root cause at the level of *Dosha, Dhatu*, and *Agni*, aiming for long-term correction of HPO axis dysregulation. It is particularly advantageous in: (a) women with lean PCOD seeking non-hormonal management; (b) those desiring conception without induction agents; (c) adolescents with mild menstrual irregularity; and (d) patients seeking long-term metabolic correction.

An integrative approach — combining Ayurvedic Shodhana and Shamana with modern monitoring (hormonal assays, ultrasound folliculometry, insulin indices) — represents a rational and patient-centred framework for PCOD management [25].

7. CONCLUSION

The Ayurvedic concept of *Artavkshaya* provides a coherent and clinically relevant framework for understanding PCOD in its metabolic, hormonal, and gynaecological dimensions. The correspondence between *Vata-Kapha Prakopa, Dhatvagnimandya, Medodushti*, and the pathophysiology of PCOD is compelling and warrants structured clinical investigation.

Classical formulations such as Kanchanar Guggulu, Rajapravartini Vati, and Shatapushpa-Shatavari Kalpa, alongside Panchakarma procedures like Uttara Basti and Virechana, hold significant promise as safe, cost-effective, and holistic interventions. Rigorous randomized controlled trials with standardized Ayurvedic protocols, validated outcome measures, and long-term follow-up are needed to strengthen the evidence base.

An integrative medicine approach that respects the wisdom of *Artavkshaya* while incorporating modern diagnostics offers the most promising pathway toward comprehensive PCOD management in the Indian healthcare context.

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