

Understanding the Pathophysiology of PCOD in Ayurveda: A Review Based on Dosha-Dushya Concept

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Abstract- Polycystic Ovarian Disease (PCOD) is a common endocrine and metabolic disorder affecting a significant percentage of women in their reproductive years. Characterized by clinical features such as oligomenorrhea, anovulation, infertility, obesity, and hyperandrogenism, PCOD poses a complex challenge due to its multifactorial origin and systemic implications. While modern medicine primarily addresses symptom suppression through hormonal and insulin-sensitizing therapies, Ayurveda offers a holistic approach to understanding and managing this condition by focusing on the underlying imbalances in the body's doshas, dushyas, agni, and srotas. In Ayurvedic terms, PCOD can be interpreted as a disorder primarily involving Kapha and Vata dosha, leading to srotorodha (channel obstruction), meda dhatu dushti (fat tissue vitiation), and artava dusti (disorder of menstrual function). The dysfunction of Apana Vata, impairment of agni (digestive and tissue-level metabolism), and accumulation of ama (metabolic toxins) result in the formation of ovarian cysts, anovulatory cycles, and hormonal imbalances. This review explores the Ayurvedic pathophysiology of PCOD through the lens of Dosha-Dushya Sammurchana, Nidana Panchaka, and Srotas theory, correlating these concepts with clinical manifestations described in modern gynecology. By presenting a detailed examination of classical Ayurvedic concepts such as artava pravritti, granthi formation, medoroga, and vandhyatva, this article aims to deepen the understanding of PCOD's root causes and offer a conceptual framework for integrative treatment strategies. The review highlights the importance of personalized, dosha-specific management involving shodhana (detoxification), shamana (palliative),

rasayana (rejuvenative) therapies, and lifestyle modifications to restore systemic balance and reproductive health.

Index Terms- PCOD, Ayurveda, Dosha Dushya Sammurchana, Artava Dushti, Vandhyatva, Kaphaja Granthi, Srotodushti

I. INTRODUCTION

Polycystic Ovarian Disease (PCOD) is one of the most prevalent endocrine disorders among women of reproductive age, with a global prevalence estimated to range between 6–20% depending on diagnostic criteria. It manifests as a constellation of clinical features including menstrual irregularities, hyperandrogenism (such as acne and hirsutism), polycystic ovaries, infertility, and metabolic disturbances like insulin resistance and obesity. These symptoms not only affect reproductive health but also increase the long-term risk for type 2 diabetes, cardiovascular disease, and endometrial cancer.

In modern medicine, PCOD is diagnosed based on criteria laid down by the Rotterdam consensus, which include any two of the following three: oligo/anovulation, hyperandrogenism (clinical or biochemical), and polycystic ovarian morphology on ultrasound. Despite advancements in diagnostic methods and pharmacological interventions, PCOD remains a challenging condition to manage due to its multifactorial nature and tendency for recurrence.

Most modern therapies aim at symptom suppression rather than addressing the root cause.

Ayurveda, the ancient system of Indian medicine, offers a comprehensive understanding of PCOD through the lens of Tridosha Siddhanta (three fundamental energies), Dushya (affected tissues), Agni (digestive/metabolic fire), and Srotas (body channels). According to Ayurvedic thought, diseases originate from disturbances in these fundamental principles, which disrupt the physiological harmony of the body. PCOD can be primarily understood as a disorder of Kapha-Vata predominance affecting Artavavaha Srotas, along with Agnimandya (low metabolic fire) and Meda dhatu dushti (fat tissue imbalance).

The condition is conceptually linked with Artava Dushti (disorders of the menstrual tissue), Vandhyatva (infertility), Granthi (cystic formations), Yoni Vyapad (gynecological disorders), and Medoroga (obesity-related disease). The term "PCOD" is not mentioned explicitly in classical Ayurvedic texts, but its clinical features can be mapped with these conditions based on Lakshana (signs), Nidana (causative factors), and Samprapti (pathogenesis).

An Ayurvedic approach to PCOD emphasizes Nidana Parivarjana (removal of causative factors), restoration of Agni, correction of Dosha-Dushya imbalance, and normalization of Artava pravritti (menstrual function). This makes the Ayurvedic perspective unique in not only offering symptomatic relief but also addressing the root cause and restoring systemic harmony.

This review aims to elaborate on the Ayurvedic understanding of PCOD through the Dosha-Dushya lens, providing insights into the classical foundations, pathogenesis, and conceptual relevance to modern clinical features. Such integrative interpretation is vital for developing evidence-based, holistic management strategies rooted in Ayurveda.

II. AIMS AND OBJECTIVES

- To explore the Ayurvedic perspective of PCOD with special reference to the Dosha-Dushya concept.
- To correlate classical descriptions of artava dushti, vandhyatva, and granthi with clinical features of PCOD.
- To analyze the role of doshas, dushyas, and srotas in the samprapti (pathogenesis) of PCOD.

- To provide a foundational Ayurvedic framework for diagnosis and individualized treatment planning in PCOD.

III. MATERIALS AND METHODS

Type of Study:

Narrative review study based on classical Ayurvedic texts and modern medical literature.

Sources of Data:

Ayurvedic texts: Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, Kashyapa Samhita, and relevant commentaries.

Nighantus & compendiums: Bhavaprakasha, Yogaratnakara, and Sharangadhara Samhita.

Modern references: Peer-reviewed journal articles on PCOD, clinical studies, and WHO/Rotterdam diagnostic guidelines.

Databases searched: PubMed, Google Scholar, AYUSH Research Portal.

Inclusion Criteria:

Ayurvedic conceptual texts and translations related to artava dushti, vandhyatva, granthi, medoroga, and prameha.

Modern clinical literature on PCOD's pathophysiology, symptomatology, and metabolic involvement.

Exclusion Criteria:

Studies unrelated to reproductive or gynecological conditions.

Non-peer-reviewed sources or anecdotal blogs.

Method of Analysis:

The Ayurvedic concepts of disease pathology (samprapti) were mapped and compared with modern pathophysiology of PCOD. Dosha involvement, dushya vitiation, srotas (channels), and agni status were analyzed in relation to diagnostic features like menstrual irregularities, cyst formation, hormonal imbalances, and metabolic syndromes. The principles of samprapti ghataka and nidana panchaka were used to structure the review.

Ayurvedic Understanding of Artava and Its Regulation

In Ayurveda, Artava refers broadly to the female reproductive essence, encompassing both the menstrual blood and the ovum, depending on the context. It is a vital component of a woman's physiology and is closely linked with fertility, hormonal balance, and overall reproductive health.

The origin, development, and proper functioning of artava depend on the integrity of dhatu poshana

(nourishment of tissues), tridosha balance, and unobstructed flow through srotas (channels). Any deviation in these processes results in artava dushti (disorders of the menstrual function), which plays a central role in the manifestation of conditions such as PCOD.

1. Artava as a Dhatu and its Roots in Rasa-Rakta
According to classical texts, Artava is considered either:

- The upadhatu (secondary tissue product) of Rasa dhatu (as per Sushruta Samhita), or
- Closely nourished by Rasa and Rakta dhatus, contributing to its quality and quantity.

This connection underlines the importance of proper digestion (agni), nutrient assimilation, and fluid metabolism for the healthy formation of artava. Impaired rasa dhatu poshana leads to alpa artava (scanty menstruation) or nashtartava (amenorrhea), as seen in many PCOD cases.

Certainly! Here's the expanded section on "Ayurvedic Understanding of Artava and Its Regulation" for your review article:

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2. Role of Apana Vata in Artava Vyavasta (Regulation)

Apana Vata, a subtype of Vata dosha located in the pelvic region, governs:

- Artava nirmana (formation of ovum and menstrual blood)
- Artava pravritti (menstrual flow)
- Garbha nivesha and prasava (implantation and childbirth)

In PCOD, when Apana Vata is disturbed—often due to aama, stress, or sedentary lifestyle—it leads to irregular cycles, delayed ovulation, and retained menstrual blood or anovulation. This results in symptoms akin to artava kshaya or granthi formation (cyst development), indicating the deep link between vata dushti and PCOD pathophysiology.

3. Artavavaha Srotas and Srotorodha

The Artavavaha srotas, described in Ayurvedic anatomy, are the specialized channels responsible for the creation, transport, and expulsion of artava. Their integrity is crucial for proper ovulatory and menstrual function. Charaka mentions that these srotas originate from the Garbhashaya (uterus) and Artavavahi dhamani (ovarian and uterine vessels).

Obstruction (sanga) or contamination (dushti) of these channels due to kapha, aama, or meda leads to srotorodha, preventing the timely release of the ovum and contributing to the formation of ovarian cysts. This is one of the most direct parallels to the modern pathophysiology of PCOD.

4. Influence of Agni on Artava Production

The concept of agni extends beyond digestion—it regulates all metabolic activities, including the transformation of food into dhatus. When jatharagni (digestive fire) and dhatvagni (tissue-specific metabolic fire) are impaired, it leads to:

- Ama formation (toxins or undigested metabolic waste)
- Hypofunctioning of tissues like rasa, rakta, meda, and eventually artava

In PCOD, this can be seen in the form of poor ovum maturation, hormonal imbalance, and anovulatory cycles. Hence, agnideepana (enhancement of agni) and ama pachana (detoxification) are essential steps in Ayurvedic management.

5. Monthly Cyclicity and Role of Ojas

Ayurveda also recognizes the monthly rhythm of artava under the influence of lunar cycles and ojas (vital essence). The integrity of ojas ensures

balanced hormonal signaling and immunity, both of which are affected in PCOD. Disruption of biological rhythms—due to stress, poor diet, or hormonal contraceptives—leads to breakdown of this cyclical balance, manifesting as menstrual irregularities.

Summary of Ayurvedic Regulators of Artava:

Factor	Function in Artava Regulation
<i>Rasa & Rakta Dhatus</i>	Nourishment and quality of menstrual tissue
<i>Apana Vata</i>	Movement, elimination, and ovulatory function
<i>Agni (Jatharagni & Dhatvagni)</i>	Metabolic conversion and tissue nourishment
<i>Artavavaha Srotas</i>	Channels for formation and release of artava
<i>Ojas & Manas (Mind)</i>	Hormonal rhythm, emotional balance, fertility regulation

Nidana (Etiological Factors) of PCOD in Ayurveda

- Excessive intake of heavy, oily, cold, and sweet food (Kapha-increasing diet)
- Sedentary lifestyle and lack of physical activity
- Mental stress and suppression of natural urges
- Hormonal contraceptives or irregular menstrual practices
- Unwholesome food combinations (viruddha ahara)

Samprapti Ghataka of PCOD (Pathogenesis Components)

Ghataka	Details
Dosha	Kapha > Vata > Pitta
Dushya	Rasa, Rakta, Meda, Artava, Shukra
Srotas	Artavavaha, Raktavaha, Medovaha Srotas
Srotodushti	Sanga (obstruction), Granthi (cyst formation)
Agni	Jatharagni & Dhatvagni mandya
Udbhava Sthana	Amashaya (GI tract - origin of kapha & ama)
Sthana Samshraya	Artavavaha srotas, Yoni, Ovaries

Rogamarga	Abhyantara (internal)
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Dosha-Dushya Sammurchana in PCOD

In PCOD, the primary dosha is Kapha, which leads to srotrodha (channel obstruction), accumulation of meda and formation of granthi (cyst-like structures). Secondary involvement of Vata causes irregularity in artava pravritti (menstrual flow) and andhavikruti (ovulatory dysfunction). Pitta may contribute to inflammation and hormonal imbalance.

Dushya Involvement:

Rasa/Rakta Dhatu: Irregular and scanty menstruation

Meda Dhatu: Obesity, insulin resistance

Shukra/Artava Dhatu: Ovulatory dysfunction, infertility

Ayurvedic Clinical Correlation of PCOD

Yoni Vyapad (Vandhyatva): Anovulation & infertility

Artava Dushti: Oligomenorrhea, amenorrhea

Granthi (Cyst Formation): Kapha-mediated masses in reproductive system

Medoroga & Prameha: Associated obesity and insulin resistance

IV. DISCUSSION

The pathogenesis of Polycystic Ovarian Disease (PCOD) in Ayurveda unfolds through a complex interaction of dosha, dushya, agnimandya, and srotodushti. Central to this understanding is the disturbance of Kapha and Vata dosha, leading to obstruction (sanga) in artavavaha srotas (reproductive channels) and the subsequent formation of granthi (cyst-like masses). The modern understanding of PCOD—characterized by anovulation, hyperandrogenism, and polycystic ovarian morphology—correlates well with these Ayurvedic principles when interpreted through the lens of samprapti (pathogenesis) and dosha-dushya sammurchana.

Kapha-Vata Dominance in PCOD

In PCOD, the excessive accumulation of Kapha—due to ahara (diet) and vihara (lifestyle) factors like sedentary behavior, heavy and sweet food intake—results in a buildup of mala (wastes), ama (metabolic toxins), and obstruction in vital srotas. This leads to the formation of cysts in the ovaries. Kapha’s qualities of heaviness (guru), coldness (sheeta), and sluggishness (manda) hinder the regular follicular development and rupture, resulting in anovulation. Simultaneously, Vata dosha, particularly Apana Vata, which governs menstruation and ovulation,

becomes vitiated. This results in irregular or scanty menstrual flow (artava kshaya), infertility (vandhyatva), and irregular ovulatory cycles. The disturbed Vata also facilitates displacement and instability of artava, making it difficult for proper follicular maturation and ovulation.

Although Pitta is not the primary dosha involved, its role cannot be completely ignored. In some PCOD cases, particularly those with acne, hirsutism, and inflammation, Pitta dushti plays a significant part by disturbing the hormonal milieu. This can be related to Rakta dushti or Raktavaha srotas dysfunction in Ayurveda.

Dushya Involvement and Dhatu Pathology

The primary dushyas involved in PCOD include:

- Rasa and Rakta Dhatus: Responsible for nourishing artava and supporting regular menstruation. Rasa dushti leads to defective nourishment of reproductive tissues.
- Meda Dhatu: Obesity and metabolic syndrome commonly associated with PCOD reflect meda dushti, which is deeply linked with Kapha vriddhi.
- Shukra/Artava Dhatu: The final reproductive tissue which, when vitiated, results in infertility and defective ovum quality.

The pathological link between Meda dhatu and reproductive tissues also explains why weight loss in PCOD patients often results in the resumption of ovulation and improved fertility, both in modern and Ayurvedic terms.

Agnimandya and Ama Formation

Agni, the digestive/metabolic fire, plays a pivotal role in maintaining the balance of doshas and the health of dhatus. In PCOD, mandagni leads to improper digestion and formation of ama. This ama, when circulating in the body, clogs the srotas, especially artavavaha srotas, leading to sanga (blockage) and development of granthi (ovarian cysts). Therefore, ama pachana (detoxification) and agnideepana (enhancing metabolism) are critical in the management.

Srotodushti: The Channel Blockage Theory

According to Srotas Shastra, artavavaha srotas are essential channels responsible for the flow and regular function of menstrual tissue. In PCOD, there is often srotorodha due to Kapha and ama, which results in obstruction of ovulation. This blockage can be correlated to the arrested or incomplete

follicular rupture seen in ultrasound findings of polycystic ovaries.

Other srotas involved include:

- Medovaha Srotas – disturbed lipid metabolism and obesity
- Raktavaha Srotas – involvement of Pitta and hormonal imbalance
- Manovaha Srotas – emotional stress as a contributing factor

Ayurvedic Diagnosis and Correlation with Modern Terms

While PCOD as a term does not appear in the classical texts, several Ayurvedic conditions mirror its clinical features:

- Artava Kshaya – scanty or delayed menstruation
- Vandhyatva – infertility due to anovulation
- Pushpaghni Jataharini – congenital or acquired absence of menstruation
- Kaphaja Yoni Vyapad – vaginal disorders due to excessive Kapha
- Granthi – cystic or nodular formations

These correlations provide a foundation for individualized and prakriti-based treatment protocols, which address the root cause rather than just symptomatic relief.

Multifactorial Approach in Ayurvedic Management

The Ayurvedic management of PCOD requires a Shodhana (detoxification) and Shamana (palliative) approach. Panchakarma, particularly Vamana and Virechana, is often indicated in Kapha-Pitta disorders, while Basti addresses Vata and menstrual irregularities. Herbal medications such as Shatapushpa, Shatavari, Guduchi, Kanchanara guggulu, and Ashoka have shown efficacy in clinical settings. Rasayana therapy is often used for long-term tissue rejuvenation and hormonal regulation. Furthermore, correction of ahara and vihara is indispensable. Low-glycemic, light, and warm foods; regular exercise; proper sleep; and stress management are as important as medicinal intervention.

V. CONCLUSION

PCOD, from an Ayurvedic standpoint, is a result of kapha-vata predominance, artava dushti, srotorodha, and agnimandya. Understanding the dosha-dushya interactions and nidana samprapti offers a strong foundation for personalized, root-cause-based Ayurvedic management. Early interventions involving dietary regulation, lifestyle modification,

panchakarma, and herbal formulations can significantly restore reproductive health and hormonal balance.

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