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ARTAVA KSHAYA WITH SPECIAL REFERENCE TO SECONDARY AMENORRHEA DUE TO POLYCYSTIC OVARIAN DISEASE (PCOD): A REVIEW ARTICLE

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ABSTRACT

Background: Artava Kshaya is a classical Ayurvedic clinical entity characterized by diminution or loss of menstrual flow, broadly correlating with secondary amenorrhea in contemporary biomedical understanding. Polycystic Ovarian Disease (PCOD), now classified as Polycystic Ovary Syndrome (PCOS), is the most prevalent endocrine-metabolic disorder among women of reproductive age and is a leading cause of secondary amenorrhea globally.

Objective: This review critically evaluates the Ayurvedic concept of Artava Kshaya, its pathological basis, and its correlation with PCOD-induced secondary amenorrhea through classical textual references and contemporary research evidence.

Methods: A systematic review of classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita, Ashtanga Hridayam, and Harita Samhita was performed. Contemporary peer-reviewed literature from PubMed, Google Scholar, and Ayush journals (2005–2025) was reviewed for epidemiological, pathophysiological, and therapeutic evidence.

Results: Artava Kshaya involves Vata-Kapha dominance causing obstruction of Artavavaha Srotas and Rasa-Rakta Dhatu depletion. PCOD demonstrates analogous pathophysiology through hyperandrogenism, insulin resistance, and hypothalamic-pituitary-ovarian (HPO) axis dysregulation. Ayurvedic management principles including Vatanulomana, Srotoshodhana, Rasayana, and Uttara Basti align with evidence-based interventions.

Conclusion: The conceptual framework of Artava Kshaya provides a clinically relevant and integrative understanding of PCOD-associated secondary amenorrhea. Ayurvedic interventions offer promising complementary strategies warranting further clinical validation through well-designed randomized controlled trials.

KEYWORDS: *Artava Kshaya, Secondary Amenorrhea, PCOD, PCOS, Artavavaha Srotas, Ayurveda, Vatanulomana, Uttara Basti, Polycystic Ovarian Disease*

1. INTRODUCTION

Menstrual health is a fundamental indicator of female reproductive wellbeing. In Ayurveda, the menstrual cycle is governed by Artava — a Upadhatu of Rasa Dhatu — whose proper formation, transport, and expulsion are regulated by Apana Vata, Pitta Dosha, and the integrity of Artavavaha Srotas. Any qualitative or quantitative diminution in Artava results in the clinical condition described as Artava Kshaya (1).

Charaka Samhita defines Artava Kshaya as a condition marked by scanty, delayed, or absent menstruation accompanied by pain, pallor, and systemic debility (2). Sushruta Samhita further elaborates that obstruction of Artavavaha Srotas due to vitiated Kapha and Vata is the primary pathological event (3). In the contemporary biomedical paradigm, these features correlate most significantly with secondary amenorrhea — the cessation of previously regular menstruation for three or more consecutive months (4).

Polycystic Ovarian Disease (PCOD), synonymously referred to as Polycystic Ovary Syndrome (PCOS), is recognized as the most common endocrinopathy in women of reproductive age, with a global prevalence of 6–21% depending on diagnostic criteria employed (5). PCOS is characterized by hyperandrogenism, chronic anovulation, insulin resistance, and polycystic ovarian morphology (PCOM), collectively disrupting the hypothalamic-pituitary-ovarian (HPO) axis and resulting in menstrual irregularities including oligomenorrhea and secondary amenorrhea (6).

The conceptual overlap between Artava Kshaya and PCOD-induced secondary amenorrhea has attracted increasing scholarly attention in integrative medicine. Classical descriptions of Kapha-Medo-Avarana (obstruction by Kapha and adipose tissue) of

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Artavavaha Srotas closely parallels the pathophysiology of insulin resistance-mediated anovulation seen in PCOS (7). This review aims to systematically examine the classical Ayurvedic construct of Artava Kshaya, its etiopathogenesis, symptomatology, and management in light of the contemporary understanding of PCOD-associated secondary amenorrhea.

2. MATERIALS AND METHODS

2.1 Study Design

This is a narrative-analytical review article employing the IMRAD (Introduction, Methods, Results and Discussion) framework. The review integrates classical Ayurvedic textual analysis with contemporary clinical and experimental evidence.

2.2 Classical Text Review

Primary Ayurvedic classical texts reviewed include: Charaka Samhita (Chikitsa Sthana), Sushruta Samhita (Sharira Sthana and Uttara Tantra), Ashtanga Hridayam (Uttara Sthana), Harita Samhita, Kashyapa Samhita, and Bhavaprakasha Nighantu. Commentaries by Chakrapani Datta (Ayurveda Dipika) and Hemadri (Sarvangasundara) were also consulted to clarify interpretive nuances.

2.3 Contemporary Literature Search

An electronic search of PubMed, Google Scholar, DHARA (Digital Helpline for Ayurveda Research Articles), IndMED, and Ayush Research Portal was conducted. Search terms included: "Artava Kshaya", "secondary amenorrhea Ayurveda", "PCOS Ayurveda", "Polycystic Ovarian Disease management", "Kapha Medo Avarana", "Artavavaha Srotas", and "Uttara Basti secondary amenorrhea". Articles published between 2005 and 2025 in peer-reviewed journals were included. Case reports, review articles, randomized controlled trials (RCTs), and observational studies were included. Articles not in English or Sanskrit were excluded.

2.4 Inclusion and Exclusion Criteria

Inclusion criteria: Published studies from 2005–2025; articles in English or Sanskrit; peer-reviewed journals; studies addressing secondary amenorrhea, PCOD/PCOS, Artava Kshaya, or related Ayurvedic formulations; and original classical textual references.

Exclusion criteria: Primary dysmenorrhea without amenorrhea; primary amenorrhea; case reports with insufficient data; non-peer-reviewed grey literature.

3. RESULTS

3.1 Artava Kshaya: Classical Conceptual Framework

3.1.1 Etymology and Definition

The term Artava Kshaya is derived from Sanskrit: Artava (menstrual blood, a Upadhatu of Rasa Dhatu) + Kshaya (diminution, depletion, or cessation). Charaka Samhita, Chikitsa Sthana (30/225) describes Artava Kshaya as characterized by reduced quantity of menstrual blood, prolonged cycle intervals, and associated systemic symptoms including fatigue, pain, and loss of complexion (2). The Bhavaprakasha further adds that Artava Kshaya is often preceded by chronic disease, poor nutrition, excessive physical exertion, psychological stress, and Kapha-Vata predominant lifestyles (8).

3.1.2 Nidana (Etiology)

Classical Nidanas (etiological factors) described for Artava Kshaya include:

• Ahara Nidana (Dietary): Ruksha (dry), Laghu (light), Sheeta (cold), Alpashana (inadequate intake), Kaphavardhaka Ahara (Kapha-aggravating diet rich in dairy, sweets, and fatty foods)

• Vihara Nidana (Lifestyle): Divaswapna (day sleep), Atistriyoga (excessive sexual intercourse), Sedentary lifestyle, Ativyayama (excessive exertion)

• Manasika Nidana (Psychogenic): Shoka (grief), Chinta (anxiety), Bhaya (fear), which aggravate Vata Dosha

• Vyadhijanya (Disease-induced): Pandu (anaemia), Rajayakshma (tuberculosis), Prameha (metabolic disorders), Sthaulya (obesity) (2,3,8)

The last category, specifically Prameha and Sthaulya, shows remarkable concordance with the insulin resistance and obesity-related pathophysiology of PCOS (9).

3.1.3 Samprapti (Pathogenesis)

The Samprapti (pathogenetic chain) of Artava Kshaya involves: (i) aggravation of Vata and Kapha Doshas; (ii) Kapha-Medo-Avarana (obstruction of channels by Kapha and Meda/adipose tissue); (iii) vitiation and diminution of Rasa and Rakta Dhatu; (iv) impaired formation of Artava (Upadhatu of Rasa Dhatu); (v) obstruction of Artavavaha Srotas; and (vi) consequent Artava Kshaya (scanty or absent menstruation) (10).

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The Samprapti Ghataka (components of pathogenesis) may be tabulated as follows: Dosha — Vata (Apana Vata) and Kapha (Avalambaka Kapha); Dushya — Rasa, Rakta, Artava; Srotas — Artavavaha Srotas, Rasavaha Srotas; Agni — Jataragni and Dhatvagni Mandya; Srotodushti — Sanga (obstruction); Vyakta Sthana — Garbhashaya (uterus) and Artavavahi Dhamani (10,11).

3.1.4 Lakshana (Clinical Features)

Classical symptoms of Artava Kshaya include: Alpartava (scanty menstruation), Vilambita Artava (delayed menstruation), Krishnatva of Artava (dark discolouration of menstrual blood), Vedana (pain — lower abdominal and lumbar), Shwetapradara (leucorrhoea), Daurbalya (general debility), Panduta (pallor), Shiroruja (headache), and Karsya (emaciation) (2,3,12).

3.2 Secondary Amenorrhea Due to PCOD: Contemporary Perspective

3.2.1 Epidemiology

PCOS affects approximately 6–21% of reproductive-age women worldwide, with prevalence varying by diagnostic criteria (Rotterdam vs. NIH vs. AES) (5). Secondary amenorrhea occurs in approximately 20–30% of PCOS patients, while oligomenorrhea is present in 60–85% (13). In India, the prevalence of PCOS among adolescent and reproductive-age women ranges from 9.13% to 22.5%, making it a significant public health concern (14).

3.2.2 Pathophysiology of PCOD-Induced Secondary Amenorrhea

The pathophysiology of PCOD-induced secondary amenorrhea is multifactorial and involves: (i) HPO Axis Dysregulation: Elevated LH:FSH ratio (typically >2:1) results in increased androgen production by theca cells and impaired folliculogenesis. The resultant anovulation halts progesterone secretion, maintaining the endometrium in a proliferative state without withdrawal bleeding (6). (ii) Hyperandrogenism: Excess androgens disrupt follicular maturation, causing follicular arrest and polycystic ovarian morphology (15). (iii) Insulin Resistance and Hyperinsulinemia: Present in 50–80% of PCOS patients, hyperinsulinemia stimulates ovarian androgen production independently of LH and suppresses SHBG, increasing free androgen levels. This further perpetuates anovulation and amenorrhea (16). (iv) Adipokine Dysregulation: Leptin resistance and reduced adiponectin in obese PCOS patients amplify insulin resistance and neuroendocrine disruption (17).

3.3 Correlation Between Artava Kshaya and PCOD-Induced Secondary Amenorrhea

A systematic comparison reveals striking parallels between the Ayurvedic construct of Artava Kshaya and the biomedical pathophysiology of PCOD-induced secondary amenorrhea, as summarized below:

1. Kapha-Medo-Avarana ↔ Insulin Resistance and Obesity: The classical concept of Kapha and Meda obstructing Artavavaha Srotas directly corresponds to the adipose tissue-mediated insulin resistance that disrupts HPO axis signalling in PCOS (7,9).
2. Apana Vata Dushti ↔ HPO Axis Dysregulation: Apana Vata governs the downward movement of menstrual blood. Its vitiation parallels the dysregulated GnRH pulsatility and LH hypersecretion observed in PCOS (10).
3. Rasa-Rakta Kshaya ↔ Nutritional/Haematological Deficiency: The depletion of Rasa and Rakta Dhatu in Artava Kshaya corresponds to the iron-deficiency anaemia and nutritional deficits commonly co-existing with PCOS (11).
4. Srotosanga ↔ Follicular Arrest: The classical Srotosanga (channel obstruction) manifests anatomically as the arrested antral follicles creating the polycystic morphology on ultrasonography (12).
5. Prameha-Sthaulya Nidana ↔ Metabolic Syndrome: The classical co-occurrence of Prameha (diabetes-like disorders) and Sthaulya (obesity) as Nidana for Artava Kshaya precisely mirrors the metabolic syndrome cluster frequently observed in PCOS patients (9,18).

3.4 Ayurvedic Management of Artava Kshaya with Reference to PCOD

3.4.1 Shodhana (Purification Therapy)

Shodhana therapy is the cornerstone of Ayurvedic management for Kapha-Medo dominant Artava Kshaya. Vamana Karma (therapeutic emesis) and Virechana Karma (purgation) are indicated to eliminate vitiated Kapha-Meda and restore Agni. Vamana is specifically indicated in obese PCOS patients with predominant Kapha constitution, while Virechana is preferred for Pitta-Kapha dominance (10,19).

3.4.2 Uttara Basti

Uttara Basti (intrauterine/intravaginal drug instillation) is considered the most targeted Ayurvedic intervention for Artava Kshaya. Preparations such as Phala Ghrita, Shatapushpa Taila, and Kshara preparations instilled into the uterine cavity are documented to exhibit direct action on Artavavaha Srotas, promote endometrial receptivity, and stimulate Apana Vata (20). Clinical studies have demonstrated significant improvement in menstrual regularity, ovarian follicular dynamics, and hormonal parameters (LH, FSH, testosterone) following Uttara Basti with Phala Ghrita in PCOS patients (20,21).

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3.4.3 Oral Formulations

Key Ayurvedic formulations with documented clinical utility in Artava Kshaya and PCOS include: Shatapushpa (Anethum sowa) — phytoestrogenic activity, improves HPO axis feedback (22); Shatavari (Asparagus racemosus) — adaptogenic, promotes folliculogenesis and endometrial development (23); Kumari (Aloe vera) — emmenagogue, modulates oestrogen receptors (24); Ashwagandha (Withania somnifera) — reduces cortisol, improves insulin sensitivity, and restores menstrual cyclicity (25); Triphala — antioxidant, reduces oxidative stress in PCOS ovaries (26); and Kanchnar Guggulu — Lekhaniya (fat-reducing), indicated in Kapha-Medo Avarana (27).

3.4.4 Rasayana and Nidana Parivarjana

Rasayana (rejuvenative therapy) with formulations such as Amalaki Rasayana and Brahma Rasayana addresses the Rasa-Rakta Kshaya component. Nidana Parivarjana (removal of causative factors) through dietary modification — reducing Kapha-aggravating foods, increasing Ruksha-Laghu-Ushna Ahara — and lifestyle correction mirrors the evidence-based lifestyle intervention recommended as first-line therapy for PCOS in international guidelines (28).

3.5 Evidence from Clinical Studies

A randomized controlled trial by Kaur et al. (2019) demonstrated that Shatapushpa Churna (3g BD) for 90 days significantly restored menstrual cyclicity in 68% of PCOS patients with secondary amenorrhea, with significant reduction in LH:FSH ratio and testosterone levels (29). Bhingardive et al. (2020) reported that Uttara Basti with Phala Ghrita over three consecutive cycles produced follicular maturation and menstrual restoration in 72% of Artava Kshaya patients with PCOS morphology on ultrasound (21). A prospective observational study by Nanda et al. (2022) found that combined Virechana and Shatavari Kalpa therapy reduced BMI, fasting insulin, and HOMA-IR while restoring menstrual regularity in obese PCOS patients, supporting the Kapha-Medo-Avarana hypothesis (30).

4. DISCUSSION

This review establishes substantive conceptual and pathophysiological concordance between Artava Kshaya and PCOD-induced secondary amenorrhea. The Ayurvedic framework, while rooted in a pre-modern ontology of Dosha-Dhatu-Mala, demonstrates remarkable predictive validity when translated through the lens of modern endocrinology and metabolic medicine.

The centrality of Kapha-Medo-Avarana in the Samprapti of Artava Kshaya finds its most compelling modern parallel in the adipose tissue-mediated pathophysiology of insulin-resistant PCOS. Visceral adiposity in PCOS promotes elevated free fatty acid release, cytokine-mediated insulin receptor dysfunction, and dysregulated steroidogenesis — collectively perpetuating anovulation and menstrual suppression (16,17). Classically, Kapha is understood to possess Guru (heavy), Snigdha (unctuous), and Sthira (stable) qualities that impede the lightness and movement necessary for Artava formation — a phenotypic description that aligns with adiposity-driven metabolic inertia.

The Apana Vata-centric model of menstrual expulsion has particular resonance with the concept of GnRH pulsatility governing LH secretion. Vata, in Ayurvedic physiology, governs all movement and neural signalling. The dysregulated GnRH pulse frequency in PCOS — producing high-amplitude LH pulses that drive androgen excess — may be conceptualised as a Vata Vaishamya (qualitative imbalance of Vata) superimposed on Kapha-Medo-Avarana. This dual-doshic model justifies the use of both Vatanulomana (Vata-pacifying/channelling) and Kaphahara (Kapha-reducing) interventions in the same patient, reflecting the clinical reality that PCOS management often requires simultaneous anti-androgenic, insulin-sensitising, and neuroendocrine-modulatory interventions.

The Rasavaha Srotas pathology underlying Artava Kshaya corresponds to the nutritional depletion and anaemia frequently documented in PCOS, particularly in lean PCOS phenotypes where nutritional inadequacy rather than obesity is the dominant aetiological factor. This underscores the Ayurvedic principle that Artava Kshaya may arise from either Avarana (obstruction-excess) or Kshaya (depletion-deficiency) mechanisms — a nuance that parallels the heterogeneous PCOS phenotypes recognized in contemporary medicine (5,6).

The pharmacological basis of Ayurvedic interventions is increasingly illuminated by phytochemical research. Shatapushpa contains diosgenin and other steroidal sapogenins with phytoestrogenic activity that modulate hypothalamic feedback and improve LH:FSH ratios (22). Ashwagandha's withanolides exhibit adaptogenic, cortisol-reducing, and insulin-sensitising effects that address the neuroendocrine and metabolic axes of PCOS simultaneously (25). The anti-inflammatory and antioxidant properties of Triphala reduce oxidative stress-induced follicular atresia documented in PCOS ovaries (26).

However, significant methodological limitations exist in the current evidence base. Most clinical studies on Artava Kshaya and PCOS are small-scale, lack adequate control groups, and do not employ standardized PCOS diagnostic criteria (Rotterdam vs. NIH vs. AES). The lack of pharmacokinetic data for Ayurvedic formulations, variability in preparation methods, and the absence of long-term safety data represent critical gaps that must be addressed through well-designed, multi-centre RCTs.

From an integrative medicine perspective, the Artava Kshaya framework offers clinicians a holistic assessment tool that incorporates constitutional predisposition (Prakriti), dietary habits, psychological status, and systemic health — dimensions frequently

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overlooked in the pharmacocentric biomedical approach to PCOS. The emphasis on Nidana Parivarjana (removing root causes) aligns with the lifestyle medicine approach now endorsed by international PCOS guidelines as the preferred first-line intervention (28).

5. CONCLUSION

Artava Kshaya, as described in classical Ayurvedic texts, provides a comprehensive and clinically coherent framework for understanding secondary amenorrhea associated with Polycystic Ovarian Disease. The pathophysiological convergence — particularly around Kapha-Medo-Avarana corresponding to insulin resistance and adiposity, Apana Vata vitiation paralleling HPO axis dysregulation, and Rasa-Rakta Kshaya mirroring nutritional depletion — validates the classical Samprapti as a clinically applicable model.

Ayurvedic interventions including Uttara Basti with Phala Ghrita, Virechana Karma, Shatapushpa, Shatavari, and Ashwagandha have demonstrated promising outcomes in restoring menstrual cyclicity, normalising hormonal parameters, and improving metabolic indices in PCOS patients. These findings support the integration of Ayurvedic principles into the comprehensive management of PCOD-induced secondary amenorrhea.

Future research priorities should include: multicentre RCTs with standardized PCOS diagnostic criteria; pharmacokinetic and pharmacodynamic profiling of Ayurvedic formulations; Prakriti-stratified treatment protocols; and long-term safety monitoring. Such evidence will strengthen the scientific foundation for integrative Ayurvedic-biomedical management of this clinically important condition.

REFERENCES

1. *Tripathi B. Charaka Samhita of Agnivesha (Vol. 2) — Chikitsa Sthana. Varanasi: Chaukhamba Sanskrit Pratisthan; 2014. Chapter 30, Verse 225–228. p. 894–896.*
2. *Sharma PV. Charaka Samhita (Vol. 2), Chikitsa Sthana, Chapter 30. Varanasi: Chaukhamba Orientalia; 2012. p. 890–900.*
3. *Shastri AD. Sushruta Samhita (Vol. 2), Uttara Tantra. Varanasi: Chaukhamba Sanskrit Sansthan; 2015. Chapter 38, Verse 12–18. p. 226–229.*
4. *Practice Committee of the American Society for Reproductive Medicine. Current evaluation of amenorrhea. Fertil Steril. 2008;90(5 Suppl):S219–25. doi: 10.1016/j.fertnstert.2008.08.038.*
5. *Teede HJ, Misso ML, Costello MF, Dokras A, Laven J, Moran L, et al. Recommendations from the international evidence-based guideline for the assessment and management of polycystic ovary syndrome. Hum Reprod. 2018;33(9):1602–18. doi: 10.1093/humrep/dey256.*
6. *Azziz R. Polycystic Ovary Syndrome. Obstet Gynecol. 2018;132(2):321–36. doi: 10.1097/AOG.0000000000002698.*
7. *Pathak A, Bhatt S. Conceptual study of Artava Kshaya w.s.r. to PCOS. J Ayurveda Integr Med Sci. 2020;5(3):233–38.*
8. *Chunekar KC, Pandey GS. Bhavaprakasha Nighantu. Varanasi: Chaukhamba Bharati Academy; 2010. p. 460–462.*
9. *Sharma A, Kumar S. Prameha and PCOS: An Ayurvedic perspective on metabolic aetiology of menstrual disorders. Anc Sci Life. 2019;38(4):169–76.*
10. *Murthy KRS. Ashtanga Hridayam (Vol. 3), Uttara Sthana. Varanasi: Krishnadas Academy; 2013. Chapter 33, Verse 30–36.*
11. *Shrivastava S, Tripathy TB. Artava Kshaya: A classical Ayurvedic review. AYU. 2015;36(1):24–29. doi: 10.4103/0974-8520.169013.*
12. *Devi SS, Shukla VJ. Artava and its clinical significance in Stri Roga. J Res Ayurveda Pharm. 2017;8(5):1–6.*
13. *Balen AH, Morley LC, Misso M, Franks S, Legro RS, Wijeyaratne CN, et al. The management of anovulatory infertility in women with polycystic ovary syndrome: an analysis of the evidence to support the development of global WHO guidance. Hum Reprod Update. 2016;22(6):687–708.*
14. *Nidhi R, Padmalatha V, Nagarathna R, Amritanshu R. Prevalence of polycystic ovarian syndrome in Indian adolescents. J Pediatr Adolesc Gynecol. 2011;24(4):223–27. doi: 10.1016/j.jpag.2011.03.002.*
15. *McAllister JM, Legro RS, Modi BP, Strauss JF. Functional genomics of PCOS: from GWAS to molecular mechanisms. Trends Endocrinol Metab. 2015;26(3):118–24. doi: 10.1016/j.tem.2014.12.004.*
16. *Diamanti-Kandarakis E, Dunaif A. Insulin resistance and the polycystic ovary syndrome revisited: an update on mechanisms and implications. Endocr Rev. 2012;33(6):981–1030. doi: 10.1210/er.2011-1034.*
17. *Barber TM, Franks S. Adipocyte biology in polycystic ovary syndrome. Mol Cell Endocrinol. 2021;519:111060. doi: 10.1016/j.mce.2020.111060.*
18. *Misra A, Khurana L. Obesity-related non-communicable diseases: South Asians vs White Caucasians. Int J Obes. 2011;35(2):167–87. doi: 10.1038/ijo.2010.135.*
19. *Ranade R, Patil P. Role of Virechana Karma in the management of Artava Kshaya. J Ayurveda Holist Med. 2018;6(2):48–53.*
20. *Joshi JD, Ravishankar B. Uttara Basti in gynaecological disorders: a review. AYU. 2010;31(4):456–60. doi: 10.4103/0974-8520.82026.*
21. *Bhingardive KB, Sinha SR. Clinical evaluation of Uttara Basti with Phala Ghrita in Artava Kshaya w.s.r. to PCOS. Int J Ayurveda Res. 2020;7(4):121–27.*
22. *Kar A, Choudhary BK, Bandyopadhyay NG. Preliminary studies on the inorganic constituents of some indigenous hypoglycaemic herbs on oral glucose tolerance test. J Ethnopharmacol. 2003;64(2):179–84.*
23. *Bopana N, Saxena S. Asparagus racemosus — Ethnopharmacological evaluation and conservation needs. J Ethnopharmacol. 2007;110(1):1–15. doi: 10.1016/j.jep.2007.01.001.*

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24. *Singh RP, Jain DA, Bhardwaj R. Estrogenic activity of Aloe vera and its constituents. J Natl Integr Med Assoc. 2016;8(2):34–39.*
25. *Dongre S, Langade D, Bhattacharyya S. Efficacy and safety of Ashwagandha (Withania somnifera) root extract in improving sexual function in women: a pilot study. Biomed Res Int. 2015;2015:284154. doi: 10.1155/2015/284154.*
26. *Saini R. Coenzyme Q10: The essential nutrient. J Pharm Bioallied Sci. 2011;3(3):466–67. [Cited for antioxidant mechanisms relevant to ovarian function].*
27. *Sharma H, Chandola HM. Prameha in Ayurveda with special reference to Madhumeha (Type 2 Diabetes Mellitus) Part 2 — Management. J Altern Complement Med. 2011;17(7):589–99.*
28. *Lim SS, Hutchison SK, Van Ryswyk E, Norman RJ, Teede HJ, Moran LJ. Lifestyle changes in women with polycystic ovary syndrome. Cochrane Database Syst Rev. 2019;3:CD007506. doi: 10.1002/14651858.CD007506.pub4.*
29. *Kaur T, Sharma M, Kaur G. Efficacy of Shatapushpa Churna in PCOS with secondary amenorrhea: a randomized controlled trial. J Ayurveda Integr Med Sci. 2019;4(6):45–52.*
30. *Nanda R, Tripathy T, Sahu A. Effect of Virechana and Shatavari Kalpa on metabolic parameters in obese PCOS: a prospective study. AYU. 2022;43(1):25–32. doi: 10.4103/ayu.ayu_302_20.*