Received: 15 Oct 2025	Revised: 15 Nov 2025	Accepted: 15 Dec 2025

Review Article

IJAG
Lets Explore Ayurveda Gynaecology

SCITEKHUB

ISSN: 3048-5592

"ARTAVAKSHAYA (OLIGOMENORRHOEA AND HYPOMENORRHOEA): SAMPRAPTI AND THE ROLE OF ARTAVAJANANA DRAVYAS — A NARRATIVE REVIEW"

Tushar Tapadiya[1]

AFFILIATIONS:
1. Research Assistant, Ira Consultancy & Research Organisation, Bhosari, Pune, Maharashtra 411026

CORRESPONDENCE:
Tushar Tapadiya

EMAIL ID:
tushartapadiya11@gmail.com

FUNDING INFORMATION:
Not Applicable

How to cite this article:
Tapadiya T. "Artavakshaya (Oligomenorrhoea and Hypomenorrhoea): Samprapti and the Role of Artavajanana Dravyas — A Narrative Review" International Journal of Ayurveda Gynecology. 2025;2(4):15-21
Sri. 2025.1008.ijag.04.03

ABSTRACT:

Background: Infrequent and scanty menstruation are common complaints in young women, often reflecting ovulatory dysfunction, most frequently polycystic ovary syndrome (PCOS). Ayurveda describes diminished menstruation as Artavakshaya and recommends Agneya (heat-generating) Artavajanana (menstruation-inducing) drugs, together with purification therapies, for its treatment. **Objective:** To review the classical description and pathogenesis (Samprapti) of Artavakshaya, relate it to the contemporary evaluation of oligomenorrhoea and hypomenorrhoea, and summarise the clinical and experimental evidence for Artavajanana drugs and related Ayurvedic interventions. **Methods:** Classical texts (Sushruta Samhita, Charaka Samhita, Kashyapa Samhita and Bhavaprakasha Nighantu) were reviewed for the definition, causes, pathogenesis and treatment of Artavakshaya. PubMed was searched for clinical studies, systematic and scoping reviews, randomised trials, case reports and experimental studies on Ayurvedic and herbal interventions for oligomenorrhoea, hypomenorrhoea and PCOS. Findings were synthesised narratively. **Results:** Sushruta defines Artavakshaya as delayed or absent menstruation, scanty flow and vaginal pain, arising from obstruction of the channels of Artava by Vata and Kapha, and prescribes purification and Agneya drugs. Most clinical evidence concerns Shatapushpa (*Anethum sowa*), for which two uncontrolled studies reported shorter menstrual intervals, one also with reduced ovarian volume in PCOS. Small studies of Vamana followed by Shatapushpadi ghanavati, and of Krishna tila decoction with Arkapushpa taila Uttara basti, reported benefit but had major methodological limitations. A randomised trial of *Nigella sativa* in adolescents with PCOS and a 2026 systematic review of herbal compounds provide supportive but heterogeneous evidence. **Conclusion:** The classical Samprapti of Artavakshaya offers a coherent framework that maps closely onto ovulatory dysfunction. Artavajanana drugs, particularly Shatapushpa, are promising, but randomised, controlled trials with objective ovulation and hormonal outcomes are required.

KEYWORDS: Artavakshaya, Artavajanana, oligomenorrhoea, hypomenorrhoea, Shatapushpa, polycystic ovary syndrome

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INTRODUCTION

Menstrual irregularity is one of the most common reasons for gynaecological consultation in adolescents and young women. In the International Federation of Gynecology and Obstetrics (FIGO) System 1, menstrual bleeding is described by four parameters, frequency, duration, regularity and flow volume, and infrequent menstruation, irregular cycles and light flow are all recognised abnormal patterns within the broader category of abnormal uterine bleeding[1]. Infrequent menstruation (oligomenorrhoea) and scanty flow (hypomenorrhoea) often coexist and are frequently dismissed by patients as harmless, but they may indicate an underlying ovulatory, endocrine or uterine disorder[1,2].

The commonest cause of oligomenorrhoea in women of reproductive age is ovulatory dysfunction, and polycystic ovary syndrome (PCOS) is its most frequent underlying condition. The 2023 international evidence-based guideline on PCOS, developed with 39 societies and organisations across 71 countries, emphasises that PCOS has metabolic, cardiovascular, dermatological, psychological and reproductive features, and recommends healthy lifestyle, attention to emotional wellbeing and evidence-based medical and fertility therapy[3]. Other causes include functional hypothalamic amenorrhoea and premature ovarian insufficiency[4], while thyroid dysfunction, hyperprolactinaemia and, for scanty flow, intrauterine adhesions and other endometrial disorders also need to be considered. In an Indian survey of 508 young women aged 16 to 24 years, 29.1% reported irregular cycles, and irregularity was associated with stress, depression and insomnia[5].

Conventional management depends on the cause. Progestogens, including oral micronised progesterone, are used to induce withdrawal bleeding, to protect the endometrium in anovulatory women and to treat abnormal bleeding due to disordered ovulation[4]. Combined hormonal contraceptives regulate cycles in PCOS, while lifestyle modification and insulin sensitisers address the metabolic component[3]. These treatments regulate bleeding but do not always correct the underlying dysfunction, and many women seek non-hormonal alternatives. Women with PCOS in particular frequently use traditional and complementary medicine, including Ayurveda[6].

Ayurveda describes diminished menstruation under the term Artavakshaya, literally depletion of Artava, and recommends Artavajanana (menstruation-promoting) drugs together with purification therapies[7]. The aim of this review is to present the classical concept and pathogenesis of Artavakshaya, to relate them to current understanding of oligomenorrhoea and hypomenorrhoea, and to evaluate critically the published evidence for Artavajanana drugs and associated Ayurvedic interventions.

METHODOLOGY

This narrative review was prepared in two parts. First, the primary classical texts of Ayurveda, namely Sushruta Samhita (Sutra sthana, chapter 15, and Sharira sthana, chapter 2), Charaka Samhita (Chikitsa sthana, chapter 30), Kashyapa Samhita (Kalpa sthana) and Bhavaprakasha Nighantu, were studied with their standard commentaries for descriptions of Artava, Artavakshaya, its causes, pathogenesis and treatment, and for the properties of Artavajanana drugs[7–11]. Second, PubMed was searched for literature published up to October 2026 using combinations of the terms Artavakshaya, Artava kshaya, Nashtartava, oligomenorrhoea, oligomenorrhea, hypomenorrhoea, polycystic ovary syndrome, Ayurveda, Ayurvedic, herbal medicine, Shatapushpa, dill and *Nigella sativa*. Reviews, scoping and systematic reviews, randomised controlled trials, single-arm clinical studies, case reports and experimental studies were considered. Every reference cited in this article was checked against its PubMed record for authors, title, journal, year, volume, pages and digital object identifier. Retracted publications identified during the search were excluded. The findings are synthesised narratively rather than statistically.

CLASSICAL AYURVEDIC UNDERSTANDING OF ARTAVAKSHAYA

1. Artava as an Upadhatu and its formation

In Ayurveda, Artava refers both to menstrual blood and to the female reproductive element. It is regarded as an Upadhatu (secondary tissue) of Rasa dhatu, the nutrient fluid formed from digested food, and its quantity and quality therefore depend on the state of digestion and metabolism (Agni) and on the nourishment of the tissues[8,12]. Sushruta describes normal menstruation as occurring at monthly intervals, lasting about five days, neither excessive nor scanty, free

from pain and burning, and having the colour of rabbit's blood or lac dye[8]. Artava is described as Agneya, that is, predominantly of the fire element, which explains why drugs of hot potency are considered to promote its formation and flow[7,8].

The menstrual blood is carried by the Artavavaha srotas, the channels of Artava, whose roots (Mula) are the uterus (Garbhashaya) and the vessels carrying Artava (Artavavahi dhamani)[8]. Obstruction (Sanga) is one of the recognised forms of disorder of these channels, and Ayurvedic writers have used this concept to interpret conditions such as tubal blockage[13].

2. Definition and clinical features

Sushruta, in the chapter dealing with the depletion and increase of the Doshas, Dhatus and Malas, describes Artavakshaya as menstruation that does not appear at its proper time or is scanty, accompanied by pain in the vagina[7]. The definition thus covers three features, namely delayed or absent periods, reduced flow and pain, which correspond respectively to oligomenorrhoea or secondary amenorrhoea, hypomenorrhoea, and the discomfort that may accompany obstructed flow. Artavakshaya is not listed among the twenty Yonivyapad, and some authors have argued that it is described as a symptom rather than as a disease in its own right; however, the classical principle that a symptom may itself be treated as a disease justifies its consideration as a distinct clinical entity[14]. The related term Nashtartava, loss of menstruation, is used for the more severe end of the same spectrum, including secondary amenorrhoea[9].

3. Nidana (causes)

The causes described or implied in the classical texts include intake of dry, light and cold food, fasting and under-nutrition, which deplete Rasa dhatu; heavy, unctuous and sweet food, sedentary habits and day sleep, which aggravate Kapha and Meda (adipose tissue) and obstruct the channels; excessive exercise; emotional factors such as grief, fear and anxiety; and suppression of natural urges[7,9,12]. Several of these correspond to recognised modern causes of anovulation. Low body weight and excessive exercise are associated with functional hypothalamic amenorrhoea, obesity and insulin resistance are central to PCOS, and psychological stress has been linked with menstrual irregularity[3–5].

4. Samprapti (pathogenesis)

Two broad pathways can be distinguished. In the first, which may be described as a depletion (Kshaya) pathway, poor nourishment, chronic illness or excessive exertion weaken Agni and deplete Rasa dhatu, so that its Upadhatu Artava is inadequately formed[7,12]. In the second, an obstruction (Avarana or Sanga) pathway, Vata and Kapha obstruct the Artavavaha srotas; Kapha and Meda, increased by heavy diet and inactivity, coat and block the channels, while Vata, deprived of its normal downward course, dries and contracts them[7,9]. In both pathways, the result is that menstrual blood is either insufficiently formed or unable to flow, producing delayed, scanty and sometimes painful menstruation. Commentators also relate the condition to impairment of the tissue-level digestive fire (Dhatvagni), particularly of Rasa and Rakta[12].

5. Correlation with modern pathophysiology

The obstruction pathway resembles the PCOS phenotype, in which obesity, hyperinsulinaemia and hyperandrogenism disrupt follicular development and ovulation, leading to infrequent cycles[3]. Ayurvedic researchers have explicitly correlated PCOS with Artavakshaya, and a scoping review found menstruation to be among the most frequently studied outcomes of Ayurvedic clinical studies in PCOS[6,15]. The depletion pathway, by contrast, resembles hypothalamic suppression of the reproductive axis due to undernutrition, excessive exercise or stress[4]. Scanty flow with regular cycles may also indicate endometrial causes, which the classical concept of local obstruction of the channels can only loosely describe. As with other classical disorders, these parallels are heuristic. Artavakshaya is a syndrome-level description, and its contemporary assessment requires investigation of thyroid function, prolactin, androgens, gonadotrophins and pelvic ultrasound as appropriate[1,3,4].

PRINCIPLES OF AYURVEDIC MANAGEMENT

Sushruta's general principle for depletion of a tissue is to administer substances that increase it, and for Artavakshaya he specifically advises purification (Samshodhana) followed by the use of Agneya substances[7]. The treatment therefore aims to clear obstruction of the channels, correct Agni, nourish Rasa dhatu where depletion predominates, and promote the formation and flow of Artava. In practice, the approach usually has three components: purification by

therapeutic emesis (Vamana), purgation (Virechana) or enema (Basti), selected according to the predominant Dosha and the patient's strength; oral administration of Artavajanana drugs; and dietary and lifestyle correction, including the avoidance of day sleep, regular physical activity and, in overweight women, reduction of Kapha and Meda[7,9,15].

The drugs considered Artavajanana are generally of hot potency, pungent or bitter taste and Vata-Kapha-pacifying action. Commonly cited examples include Krishna tila (black sesame, *Sesamum indicum*), Kulattha (horse gram), Masha (black gram), Shatapushpa (*Anethum sowa*), Ikshvaku (bitter bottle gourd), Madanaphala (*Randia dumetorum*), Japa (hibiscus) and fermented sour preparations, together with Kumari (*Aloe vera*) and Ulatkambal in later practice[7,10,11]. Kashyapa devotes a separate chapter to Shatapushpa and Shatavari, describing Shatapushpa as particularly beneficial for menstruation and fertility[10]. Classical texts also mention local measures, including medicated oils for Uttara basti (intrauterine instillation)[9].

EVIDENCE FOR ARTAVAJANANA DRUGS

1. Shatapushpa (Anethum sowa)

Shatapushpa has the most clinical data among Artavajanana drugs. In an early single-group study at an Ayurveda teaching hospital in Odisha, 30 women aged 15 to 35 years with irregular, scanty and painful menstruation received Shatapushpa churna 5 g twice daily with cow's ghee for three months, after exclusion of tuberculous endometritis, endocrine disorders, diabetes and heart disease. The authors reported improvement in the irregularity of menstrual interval in 90.5%, duration in 79.4%, amount of flow in 90.0% and pain in all participants, with no adverse effects[16]. The absence of a control group, the use of percentage improvement in symptom scores, and the lack of ovulation or hormonal outcomes limit what can be concluded.

A more recent single-group study in this journal enrolled 30 women aged 18 to 35 years with oligomenorrhoea for at least three consecutive cycles and PCOS diagnosed by the Rotterdam criteria. Shatapushpa powder 6 g twice daily was given with 12 mL sesame oil (Tila taila) as the vehicle for three months, with assessment at three and six months. The menstrual interval shortened significantly, and median ovarian volume fell from about 10 to 5.3 cm³ on the right and from 9.1 to 5.1 cm³ on the left, but there was no significant change in the duration or amount of menstrual bleeding[17]. This study is notable for including an objective ultrasound measure and follow-up after treatment, but it remains uncontrolled, and ovarian volume and cycle length in PCOS can change spontaneously or with lifestyle change.

The scoping review of Ayurveda studies in PCOS identified Shatapushpa (dill seed) as one of the two most frequently studied single herbs[6]. Related Apiaceae plants such as fennel and caraway have also been examined in non-Ayurvedic clinical studies of PCOS[18], which supports the broader plausibility of this plant group.

2. Krishna tila (black sesame) and Uttara basti

Black sesame, taken as a decoction or with jaggery, is one of the most widely used Artavajanana remedies in Indian households and Ayurvedic practice[7,11]. The only controlled study identified compared three groups of women with Artavakshaya at the Institute for Post Graduate Teaching and Research in Ayurveda, Jamnagar. One group received Arkapushpa taila Uttara basti together with oral Krishna tila kvatha, a second received Krishna tila kvatha alone, and a third received wheat powder as placebo; 37 patients were registered and six discontinued[14]. The authors concluded that combined Uttara basti and decoction was highly effective. The very small group sizes, uncertain randomisation and blinding, and lack of detailed outcome data in the published abstract mean that this study should be regarded as preliminary. Nevertheless, its inclusion of a placebo arm was unusual in Ayurvedic gynaecology research of that period.

3. Kumari (Aloe vera)

Kumari is used in Ayurvedic practice for menstrual irregularity, often as Kumaryasava. In a letrozole-induced rat model of PCOS, an *Aloe vera* gel formulation given for 45 days restored oestrous cyclicity, improved glucose sensitivity and normalised steroidogenic activity, and co-treatment prevented development of the polycystic ovarian phenotype[19]. These findings support a mechanistic link between Kumari, insulin sensitivity and ovulatory function, but no clinical trial of Kumari for oligomenorrhoea was identified.

4. Nigella sativa (Krishna jiraka or Upakunchika)

Nigella sativa is used in Ayurveda as Upakunchika and is classified among hot, Vata-Kapha-pacifying

drugs. In a randomised controlled trial in Iran, 114 adolescents with PCOS were allocated to *N. sativa* 1000 mg daily or to cyclical medroxyprogesterone for 16 weeks, and 103 were analysed. Compared with the progestogen group, the *N. sativa* group showed greater reductions in hirsutism score, ovarian volume, luteinising hormone and testosterone, and a significantly lower frequency of oligomenorrhoea, menometrorrhagia and amenorrhoea after treatment[20]. This trial is the strongest single piece of randomised evidence for a herb in the Artavajanana category identified in this review, but it was open-label, of short duration and conducted in a single region, and its authors called for longer-term studies[20].

5. Other herbs

A 2026 systematic review of herbal compounds in PCOS, which included ten human studies with 548 participants, reported that green tea, caraway, ginger, fennel, *N. sativa* and other herbs improved biochemical, hormonal and clinical features of PCOS, while noting considerable heterogeneity in interventions, durations and sample sizes[18]. Of these, ginger (Shunthi) and fennel (Mishreya) are used in Ayurveda for their hot potency and Vata-Kapha-pacifying action. Polyherbal proprietary products have also been studied; for example, a single-arm study of a 15-ingredient Ayurvedic juice in 30 women with PCOS reported improvement in menstrual symptoms or regularity in 92.3% of completers, together with reductions in hirsutism, acne and body weight, although hormonal changes were not statistically significant[21]. Such uncontrolled, sponsor-led studies can only generate hypotheses.

PURIFICATION THERAPIES AND WHOLE-SYSTEM APPROACHES

Purification is integral to the classical treatment of Artavakshaya, particularly in the Kapha-dominant obstruction pathway. In a study of 15 women with PCOS, therapeutic emesis (Vamana) with an Ikshvaku seed formulation, followed by Shatapushpadi ghanavati 1 g daily for 45 days, was associated with significant improvements in menstrual irregularity, body mass index, non-dominant follicle count, fasting blood glucose and hirsutism[22]. In a Sri Lankan study of 40 women with subfertility and PCOS, correlated with Aarthava Kshaya, a staged regimen of purification (Shodhana), palliation (Shamana) and nourishing therapies (Tarpana) over six months was reported to improve symptoms, ovarian ultrasound findings and gonadotrophin levels[15]. Neither study had a control group.

Case reports illustrate how these elements are combined in individualised practice. A report in this journal described a woman with PCOS, diagnosed in Ayurvedic terms as infertility due to Nashtartava, who had not conceived after eleven years despite intrauterine insemination and hormonal therapy. After purification and palliative therapy, including Uttara basti, she lost 20 kg, regained regular menstruation and conceived within eight months[9]. The substantial weight loss in the first case is itself a recognised effective intervention for anovulatory PCOS[3], which illustrates the difficulty of attributing outcomes in whole-system interventions to particular components.

The scoping review of Ayurveda studies in PCOS identified 57 studies, including 13 randomised controlled trials, 9 pre-post trials and 32 case reports. Most were conducted in India and used compound formulations or complex interventions, Basti was the most frequently used procedure, and menstrual outcomes were the most studied. The reviewers recommended trials of Ayurveda as an adjunct to biomedical care, a broader range of metabolic and psychological outcomes, and rigorous reporting of adverse events[6].

DISCUSSION

The classical concept of Artavakshaya is concise but clinically meaningful. Sushruta's definition, comprising delayed or absent menstruation, scanty flow and pain, captures the core presentation of oligomenorrhoea and hypomenorrhoea[7], and the two pathogenic pathways of depletion and obstruction describe, in Ayurvedic terms, the distinction between hypothalamic suppression and the metabolic-endocrine anovulation of PCOS[3,4]. This distinction has practical implications: the obstruction pathway calls for purification, Kapha reduction and hot Artavajanana drugs, whereas the depletion pathway calls for nourishment and restoration of Agni. Applying hot, purifying treatment to a woman whose oligomenorrhoea results from undernutrition or excessive exercise would be inappropriate in both Ayurvedic and biomedical terms.

The evidence base, however, is limited. Shatapushpa, the most studied Artavajanana drug, is supported by two single-group studies showing shorter menstrual

intervals and, in PCOS, reduced ovarian volume[16,17]. Purification-based regimens and Krishna tila with Uttara basti are supported by small studies with weak designs[14,15,22], and case reports[9] cannot establish efficacy. The randomised trial of *N. sativa*[20] and the systematic review of herbal compounds in PCOS[18] add external support for hot, Vata-Kapha-pacifying herbs, but they were not conducted within an Ayurvedic framework. No randomised trial has yet compared a classical Artavajanana drug with placebo or with standard care using objective outcomes.

Several priorities follow. First, participants should be classified by cause, at minimum separating PCOS, hypothalamic, thyroid and prolactin-related, and endometrial causes, since an Artavajanana drug cannot be expected to work equally in all of them; Ayurvedic subtypes of depletion and obstruction can be recorded alongside. Second, outcomes should include cycle length recorded prospectively over at least three to six cycles, confirmation of ovulation by mid-luteal progesterone or ultrasound, hormonal and metabolic profiles, and quality of life. Third, placebo-controlled designs are feasible for oral herbal powders and should be preferred; purification therapies require pragmatic designs with blinded outcome assessment. Fourth, the contribution of weight loss and lifestyle change, which are themselves effective in PCOS[3], must be measured and accounted for. Finally, safety reporting, including liver and renal function during prolonged use of hot drugs, should be systematic[6].

Clinically, Artavajanana drugs and associated Ayurvedic measures may be considered as adjuncts for women with oligomenorrhoea or hypomenorrhoea once pregnancy, thyroid disease, hyperprolactinaemia, premature ovarian insufficiency and significant endometrial pathology have been excluded. Women with PCOS should continue to receive guideline-based screening for metabolic, cardiovascular and psychological comorbidities[3], and endometrial protection should be considered in those with prolonged amenorrhoea[4].

CONCLUSION

Artavakshaya, described by Sushruta as delayed, scanty and painful menstruation arising from depletion of Artava or obstruction of its channels by Vata and Kapha, provides an Ayurvedic framework that aligns closely with current understanding of ovulatory dysfunction and PCOS. Artavajanana drugs, particularly Shatapushpa, and purification-based regimens show promising but preliminary results, supported indirectly by randomised and systematic evidence for related herbs. Cause-specific, adequately powered randomised trials with objective ovulatory and hormonal outcomes are now needed to establish their place in integrative gynaecological care.

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